WHY PREPAREDNESS

Frontispiece

A FRENCH "75" MOUNTED ON A MOTOR-TRUCK FOR USE AGAINST AIRCRAFT

(Note the adjustable arm resting on the ground to take some of the shock of recoil from the wheels)

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WHY PREPAREDNESS

THE OBSERVATIONS OF AN AMERICAN ARMY OFFICER IN EUROPE
1914–1915

BY

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WITH AN INTRODUCTION BY

MAJOR-GENERAL LEONARD WOOD

Commanding the Eastern Division of the United States Army

ILLUSTRATED

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INTRODUCTION

HENRY J. REILLY has performed a distinctly public service in the preparation of his work "Why Preparedness." It is unfortunate there should be any uncertainty on this vitally important matter. Such as there is must be charged to the lack of interest in this subject, which has been general until recently. Captain Reilly's very clear and able statement of the reasons for preparedness is most opportune at this time.

The American people as a whole do not appreciate the fact that to-day all the other great nations of the world are thoroughly organized and prepared either for offense or defense. They do not realize that wealth and numbers avail little when opposed by well-thought-out preparation, discipline, and good leadership. Many of our people have been taught to believe that money can serve as a substitute for patriotic service; that willingness can take the place of willingness plus preparation; that one can buy preparedness ready made, as it were; that our vast population is an insurance against attack; that untrained men can meet successfully equally good men physically who are trained and disciplined.

All these assumptions are wholly false. Great wealth without ability to protect it is an incentive to war, a temptation to the would-be aggressor, and a menace to the world's peace. Great numbers untrained, undisciplined, without leadership and ignorant of the use of arms, are of little value unless adequate time is given for training and preparation. Modern war does not give time for preparation. Its approach is that of the avalanche rather than that of the glacier.

Captain Reilly is a graduate of West Point. He served for a long time in the regular army and had extensive experience in various parts of the world. He is a capable, skilled, and critical observer. He has had almost unexampled opportunity for observation during the Great War and has seen it from various standpoints as an actual observer in the field. What he writes from the military standpoint can be depended upon as accurate, and is entitled to the most careful consideration by our people. Such consideration cannot fail to create in the minds of the great majority of intelligent people reading this book a realization of the vital need of systematic, well-thought-out preparation; nor will it fail to dispel false ideas as to the value of undeveloped resources in the face of the type and degree of organization and preparedness for action which exists throughout the world to-day.

Modern war involves the organization of the financial and material resources of a nation as well as the training, discipline, and equipment of its soldiers. This organization must be such that the nation can apply its maximum strength in the minimum of time, and maintain it at top pressure for the maximum period. This all means organization in time of peace. It means an observance of Washington's advice, "In time of peace prepare for war."

The question as to preparedness can be answered in various ways. The answer most to the point is that we believe our country is worth defending and we know it cannot be successfully defended without thorough preparation, a preparation which rests not only upon organization of the industrial and financial resources of the nation, the training of its men, and the provision of adequate supplies, but also upon a moral organization which will create in the heart of each and every one of us a sense of our obligation to prepare to render efficient service for the nation in time of war as well as in time of peace; an organization which involves the practical application of the basic principle on which democracy and representative government rest—that with the privileges and opportunities of citizenship go its obligations in war as well as in peace; that manhood suffrage means manhood obligation for service.

We believe in arbitration and in the support of the great effort to establish world peace. While striving to attain these ends, we must not be unmindful of the conditions under which we live or forgetful of the fact that never at any time in the world's history was thorough preparedness more essential for national peace and safety than to-day.

LEONARD WOOD.

CONTENTS

PAGE

INTRODUCTION—MAJOR-GENERAL LEONARD WOOD . . v

AUTHOR'S PREFACE xv

PART I

THE ENTENTE ALLIES AT WAR

CHAPTER

I. FROM MANILA TO FRANCE IN WAR TIME . 1

II. FRANCE AT WAR 15

III. HOW FRANCE GOES TO WAR 22

IV. A TRIP TO ARRAS 31

V. WHY FRANCE IN 1914 WAS NOT THE FRANCE OF 1870 41

VI. HOW FRANCE HAS MAINTAINED A LARGE TRAINED ARMY SINCE THE BEGINNING OF THE WAR 51

VII. WHAT INVASION MEANS TO THE FRENCH PEOPLE 58

VIII. THE EXPERIENCES OF A FRENCH WOMAN AND HER DAUGHTER 72

IX. THE BRITISH CAMPAIGN IN FRANCE AND BELGIUM 88

PAGE

X. The British Land Forces 95

XI. Kitchener's New Army 104

XII. Conscription Needed in Great Britain 112

XIII. Summary of the Western Campaign to the end of May, 1915 122

PART II

Swiss Preparedness for War

XIV. The Military Preparedness of the Swiss 145

PART III

The Central Powers at War

XV. The German Army 155

XVI. The German Army in the War . . . 164

XVII. The Austro-Hungarian Army as a Factor in the Present War . . . 175

XVIII. Communications of the Austro-Hungarian-German Armies in Russian Poland 182

XIX. The Russians as Seen from the Austro-Hungarian Side 187

XX. What Invasion Has Meant to the Poles 193

XXI. Summary of the Russian Campaign to the End of August, 1915 204

PART IV

Modern Battle

		PAGE
XXII.	The Volunteers' First Sight of War	215
XXIII.	The Approach to a Modern Battlefield	223
XXIV.	How the Armies Have Become Entrenched	237
XXV.	The Psychology of Battle	278
XXVI.	How the Wounded are Brought in from the Battlefield	288
XXVII.	Modern Infantry in Battle	307
XXVIII.	The Famous French Field Gun	313
XXIX.	Artillery in the Present War	326
XXX.	Cavalry in Modern War	345
XXXI.	Machine Guns in the Present War	352
XXXII.	Aircraft in the Present War	357
XXXIII.	Reconnaissance and Espionage in the Present War	370
XXXIV.	Fortresses in Modern War	381

Conclusion

XXXV.	Lessons America Should Learn from the Great War	389

ILLUSTRATIONS

FACING PAGE

French 75-mm. Gun mounted on Motor-Truck . . *Frontispiece*
Gurkhas in Egypt on their way from India to France . 10
Gurkhas about to make Camp at Ismailia 10
French Infantry in their Trenches 18
French Infantry on the March 26
The Town Hall of Arras after Bombardment 38
The Graves of French Soldiers on the Marne Battlefield . 54
French *Chasseurs à Pied* 54
Ypres after Bombardment, showing Ruins of the Cloth Hall and Cathedral 66
Ruins of French Houses on the Battlefield of the Marne . 74
British Infantry about to go into Action near Bethune . 90
British 4.7-inch Gun in Action on a Rainy Day . . 90
Infantry of Kitchener's New Army 98
Infantry Wagons of Kitchener's New Army 98
Field Artillery of Kitchener's New Army 106
Signal Section of Engineers, Kitchener's New Army . 106
A Recruiting Meeting at Trafalgar Square, London . 116
Swiss Infantry on the March 148
German Field Artillery changing Position 160
Typical German Infantry Reservists 160
German Infantry at Brest Litovsk 170
A German 15-cm. Howitzer 170
Austrian Infantry on the March in Poland 178
Austro-Hungarian Field Piece in front of Ivangorod . 178
Ruined Railway Bridge over the Vistula at Ivangorod . 184
German Reservists on their way to the Front in Poland . 184
Russian Prisoners leaving the Citadel of Brest Litovsk . 190
Russian Soldiers captured at Ivangorod 190
Field Sketch of the Fighting along the Vistula . . . 194
Polish Refugees 202

FACING PAGE

Ruins of Nova Alexandria 202
British Lightly Wounded arriving at Bethune . . . 218
British Heavily Wounded at Bethune 218
French Munition Wagons en route to the Front . . . 234
Looking down on a Communicating Trench 250
Russian Trench from the Front showing Loopholes . . 250
French Sappers at work underground on a Mine Gallery . 266
Serbian Infantry advancing under Artillery Fire . . . 282
French Lightly Wounded taking a Hospital Train . 298
Austro-Hungarian Wounded 298
British Infantry in a Reserve Breastwork 310
Where twelve Russian Infantrymen were killed . . . 310
A French 75-mm. Gun in Action 314
Mounting a 305-mm. Mortar in Poland 330
A 305-mm. Mortar mounted and ready for Action . . 330
French Dismounted Cavalrymen Armed and Operating as Infantrymen in Flanders 346
Hungarian Cavalrymen 346
French Machine Gun ready for Action 354
On the Parapet of Fort Kobilyani in Front of Brest Litovsk, showing Shell Holes. 382
One of the Ivangorod Forts Demolished by the Russians before their Retreat 382

MAPS AND DIAGRAM

The Campaign in the Western Theatre of War . . *Map* 142
The Campaign in the Eastern Theatre of War . . *Map* 212
How the Armies have become Entrenched . . *Diagram* 276

AUTHOR'S PREFACE

WHEN the great European war broke out in the latter part of the summer of 1914, the author happened to be in Manila, Philippine Islands. He immediately proceeded by way of Hong-Kong, Singapore, Ceylon, and the Suez Canal to Marseilles and Paris. The news of the victory on the Marne had reached Marseilles the day before his arrival. After spending several weeks in Paris and London, he joined the American Ambulance Corps in France, where he served in various sections in the field, from the middle of October, 1914, to about the middle of February, 1915. During this time, he was with the British and French armies in northern France, and, on one occasion, was with the Belgian army for several days. In the latter part of February, 1915, in company with Mr. Robert R. McCormick, president of the *Chicago Tribune*, he again visited both the French and British fronts in northern France. Seeing the similarity of England's problem in time of war to that which would confront the United States under similar circumstances, the author returned to England in order to observe the workings of the system of raising big armies by

voluntary enlistment. After a month in England he went back to France, and soon came to the conclusion that the British and French were not going to attempt a real general offensive during the spring or summer of 1915.

Italy entered the war at this time, and the author, considering the possibilities good of Germany and Austria-Hungary making a combined offensive against Italy, decided to accompany, if possible, the troops of the Central Powers in the Italian campaign. This decision was made primarily for the reason that, having seen the British and French troops on the defensive against heavy attacks, the author desired to see something of the methods of an army acting on the offensive; also, he wished to see something of Germany, because of his interest in the question of how far comparatively small resources, well organized prior to war, could sustain an army in the field, as against immensely superior but unorganized potential resources. So much had been said of the inevitable downfall of the German army due to exhaustion of its supply of men, material, and food, with consequent victory for the Allies, even though they attempted no real offensive, that the author desired to see for himself how far the German army was being hampered through economic causes.

Accordingly, toward the end of May, 1915, the author crossed from France to Switzerland, thence

to Bavaria, and later proceeded to Berlin. Finding that there was no intention in Germany of declaring war on Italy, at least for the time being, and that consequently there would be no offensive campaign by Germany in that direction, permission was obtained to go instead to the Polish front with the Austro-Hungarian troops.

Having joined the field headquarters for the correspondents and military attachés, which was maintained near the general headquarters of the Austro-Hungarian army, the author made two trips to the actual front — one to the Twelfth Corps, General von Kövös, in front of Nova Alexandria and Ivangorod, and the other to the Sixth Corps, General Artz, at the time of the capture of Brest Litovsk. As German troops were operating alongside of these two corps, the opportunity was afforded of seeing them, as well as the Austro-Hungarians, in action. In the latter part of September, the author returned to the United States from Vienna by way of Bavaria, Switzerland, Paris, Bordeaux, and New York.

The time actually spent in Europe was a few days over a year. Having been a professional soldier for nearly fourteen years, and therefore being deeply interested in everything connected with his profession, the author tried from the beginning of his observations in Europe to put aside personal prejudice and to study the armies and

countries visited with a view of getting at the real historical and military lessons to be learned from this great war, particularly those lessons which should be of importance to the United States.

This book is founded on the personal experiences of the author and the accounts of those participants engaged in the actual fighting whom the author considered to be competent eye-witnesses. Writing of events but recently past, and in some cases not yet completed, necessarily increases the likelihood of some error creeping in. The part which any one individual can see of such a tremendous whole as the present war is very small, indeed. Even when this limitation is well understood, and an attempt is made to guard against it, there is but little doubt that those events actually witnessed are frequently given importance out of all proportion to their true value. Another difficulty in getting at the truth is due to the fact that the average person who has participated in scenes of great excitement is frequently not competent to describe what has happened. This is true enough of such exciting incidents as may occur in time of peace; so much the more is it true in war time, when there is added to undue excitement the lack of technical military knowledge, which results in the witness being confused because only partly, or not at all, understanding the reason for what is going on around him.

Few people, until they have seen it, have any

conception of what war really is. Too many have considered it a sort of a game somewhat more dangerous, perhaps, than big game shooting. As a consequence, when they first come in contact with it, and in some cases, even for some time after, it makes an entirely disproportionate impression on them. For this reason, it frequently happens that the statements of many intelligent and honest people, who are far from being cowards, are practically valueless. Rumors, inexact observation, suppression or omission of part of the facts, with exaggeration of others, and the taking of isolated incidents as representative of the whole, have been, and still are, responsible for many false impressions of the war.

Much of the material in this book has appeared from time to time in the *Chicago Tribune* and is here published with the kind permission of that paper. The photographs, with a few exceptions, were taken by the author.

The author wishes to express his appreciation of the kindness of First Lieutenant H. S. Baker and C. C. Saner, Company "A," Battalion of Engineers, Illinois National Guard, for valuable assistance in preparing the maps for publication.

H. J. R.

CHICAGO,
January, 1916.

PART I
THE ENTENTE ALLIES AT WAR

Why Preparedness

CHAPTER I

FROM MANILA TO FRANCE IN WAR TIME

September, 1914.

FROM the date of the assassination of the Archduke Ferdinand and his wife, the Manila papers had discussed the Balkan question. The possibility of the Balkans precipitating a European conflict had been so frequently spoken of, however, that few people thought the long-predicted general European war was actually on the point of breaking out.

When it was learned that Austria had declared war on Serbia, and that Russia was ready to interfere, I believed that the war had finally come, and, accordingly, arranged to leave Manila for Europe.

Up to the time of leaving Manila on August 2, no news had been received other than of Austria's declaration of war on Serbia. The two days' trip to Hong-Kong was without incident, but full of violent discussions on the part of the passengers. On arriving off Hong-Kong at daylight, the port was found to be closed. A patrol boat informed the captain of our ship that he must anchor and be examined before he would be permitted to enter

the harbor. Among the several ships of various nationalities waiting outside was a German tramp. The only incident of a two hours' wait, without news and before being examined and permitted to enter the harbor, was the passing by of two submarines which were escorting a considerable fleet of mine-laying tugs. Going up the harbor, the turbine liner *Empress of Asia*, belonging to the Canadian Pacific, was seen lying at the navy yard having guns put in her, she having been taken as an auxiliary cruiser.

On landing, it was learned that while Great Britain and Germany were still at peace, it was probably only a question of a few days before they would declare war on each other. The British had called out their naval reserves, had put the station battleship in commission, and had taken over all the merchant ships belonging to the auxiliary navy.

The question of getting to Europe was found to be a difficult one. The German liner due had failed to show up. It transpired later that at Shanghai, just as all her passengers were on the tender ready to go down stream to embark on her, they were told that she would not sail. Instead, she went straight to Tsing-Tau, the fortified naval and land base of the German Empire in China.

Nobody could say whether the French and English mail steamers would leave or not. The mails were no longer being sent over the Trans-Siberian

railway, and the Russian Consul refused to *visé* any passports to enter Siberia, which meant that, for the time being, the Siberian road was out of the question. The only ship about which there seemed to be any certainty was a Japanese steamer, sailing within a week.

After a few days, proclamations were posted everywhere announcing that Germany and Great Britain were at war. The white people, on the whole, took it very calmly; not so the Chinese. A rumor was circulated among them that the Germans would soon capture Hong-Kong, with the consequence that thousands fled by the different boats to Canton. As time went by, however, and nothing happened, many came back.

As the days passed, the wildest rumors were circulated, even among the white population. The British squadron, joined by a French cruiser and several destroyers, had coaled and gone to sea to hunt for the German squadron, which was considerably weaker both in ships and guns. Every day there was a new rumor about a naval action having been fought. One time it would be that the *Scharnhorst*, the flagship of the German squadron, had been found by the Allied squadron a short distance up the coast lacking food, water, and coal, and with ninety per cent of her men down with an epidemic. The next day the rumor would be that the British fleet had sunk the German fleet in the

North Sea, and the most elaborate details would be furnished to prove it.

In the meanwhile, the British authorities were busy gathering up all the German reservists they could lay their hands on. An American steamer from Manila was obliged to remain outside until the authorities had removed the German reservists known to be on board. Stonecutters' Island, a small island near Hong-Kong, was designated as the place on which they would be confined.

Different parts of Hong-Kong Island were prepared for defense. Some of the barricades erected showed very plainly that it was not so much a German attack which was feared, as the possibility of mob violence on the part of the many thousands of Chinese who lived in Hong-Kong.

The Hong-Kong volunteers, made up of various Britishers in commercial life, were mobilized. The older ones were used to guard banks and streets within the towns; the younger ones were sent, some to Stonecutters' Island to guard the German prisoners, and others to various important points in the defense of Hong-Kong.

The small river gunboats which the Germans had near Canton were hurriedly taken by them well up the river into China, where the breech-blocks and all ammunition were thrown overboard and the ships abandoned. The crews, taking the wireless apparatus with them, were put on passenger

boats by their officers with instructions to rendezvous, if possible, at Tsing-Tau.

A number of British merchant vessels in the harbor were prepared for transports. The rumor was that they were to carry the troops which could be spared to Europe. Others said that a combined expedition made up of Russians from Vladivostok, French from Indo-China, and British from Hong-Kong, was to attack Tsing-Tau, and that the Australian squadron was on its way to join the French and British squadron.

Food prices rose fifty per cent, partly due to the government having bought up large quantities of supplies, partly due to the price of exchange having gone up, but probably more than anything else due to the readiness of the Chinese to make as much money as possible on the slightest pretext. Everywhere the Chinese were keenly interested in the war. If a white man entered a shop or office, and gave the Chinese there half an opportunity, they immediately besieged him with questions concerning the war, particularly as to who would win. They all seemed to be impressed with the strength of Germany.

The British point of view was an interesting one. According to them, the war would be over soon, because the Allies undoubtedly would crush Germany almost immediately. Little or no attention was paid to the armed strength of the Germans,

or to the fact of their being perfectly prepared. The point most frequently made was the immense advantage Great Britain possessed in her wealth. The average man in the street allowed the Germans no good qualities of any kind, not even foresight. The few Britishers who thought differently were pooh-poohed and ridiculed every time they spoke.

The most noticeable thing about Hong-Kong was the excellent way in which the naval mobilization was carried out. The naval reserve made up of men and officers of the merchant marine, and of those on shore having to do with dockyards and such, quietly put on their uniforms, took their places, and set to work. In a very short time the big *Empress of Asia* was painted gray from waterline to truck, armed with 4.7 guns, with artillerymen as gunners, and was out at sea just off the harbor having target practice. In the navy yard all preparations were complete, so that when the other ships of the same line appeared they could be rapidly turned into auxiliary cruisers.

On several occasions the British caught German spies. One of them was caught at night cutting military telephone wires, and was promptly beaten up by the guard before being arrested.

Finally, after a week's delay, the Japanese ship appeared in the harbor, and announcement was made that she would sail the next day.

The day of departure was an interesting one, as

the passenger list contained a number of French reservists and French volunteers from Shanghai, who were joined by others from Hong-Kong. They sang the "Marseillaise" and toasted the British and the Allies, while several Britishers, who had been in the Boer War, and who were on their way home, sang "God Save the King" and toasted the French and the Allies. The German consul-general from Hong Kong, who being entitled to it, had a safe conduct, was also a passenger. After much cheering, to the accompaniment of considerable whistle blowing, the ship finally got under way and passed through the narrow entrance to the China Sea beyond. The batteries on both sides of the entrance had many tents in rear of them, and around them trenches and barbed wire entanglements to resist infantry attacks by landing parties. Buoys with red flags indicated a channel through the mines which had been laid outside.

The six days from Hong-Kong to Singapore were distinguished by a complete absence of news and by considerable discussion of the war, mostly founded on conjecture. One young Englishman on board, of a military family, who was on his way home to join the volunteers, was sure that the war would be a very easy one; in fact, he was worried because he thought it would be all over before he could get to England. The main argument advanced by the Britishers was quite similar to that

heard so often in America when the question of war is brought up: having plenty of money, they did not need to have much of an army, because when the time came they could get all the men they wanted and buy all the things they needed for them.

The attitude of the French was entirely different. With one exception, they had all completed their military service and were in the reserve. They all appreciated the value of military training and of a proper preparation for war. They all understood the tremendous strength of Germany and the tremendous advantage which her being prepared to start an aggressive campaign immediately gave her. They knew that the war was going to be a serious and hard one. They had no illusions as to its being over in a very short time. Though most of them were conscripts, they were perfectly willing to go to war; in fact, two of them, who were too old to be called to the colors, were nevertheless going home to see if they could not get back into the service. They showed plainly that a conscript can be just as ready and just as willing to fight for his country as any volunteer.

On reaching Singapore, it was learned that Japan had sent an ultimatum to Germany telling her to evacuate Tsing-Tau or she would take such steps as might be necessary. The effect of the news upon the different passengers was interesting. With practically no exceptions, all of them, regardless of

nationality, were quite opposed to permitting Japan to take part in the war. All felt quite sure that anything Japan took would never be given back, no matter what she might say, and that any strengthening of Japan could not but be a great mistake from the point of view of all white nations with interests in the Far East.

In Singapore, as in Hong-Kong, the hunt for German reservists had been going on. A considerable number of them who had succeeded in getting on a Dutch steamer were removed by a British officer with forty infantry soldiers. Alongside one of the wharves were three German merchant ships seized by the British, when the war broke out. One, in endeavoring to escape capture, had repainted her funnels and printed a Chinese name in large Chinese characters on her side.

Many French reservists coming from the Straits Settlements and Siam joined our ship at Singapore, including thirteen Catholic priests going back to serve in the army as ordinary soldiers. Among the reservists also was the French Consul-General to Siam. The French Bishop of Siam, who was going home to join the army, had sailed a few days before on a British ship.

When the ship sailed from Singapore, so far as could be seen, the only Frenchman left behind was the French Consul. This sailing was another occasion for the opening of considerable champagne,

the singing of the "Marseillaise" and of "God Save the King," to the accompaniment of frantic cheering.

All sorts of rumors had been heard by the passengers while ashore. The Japanese said they had been told at their consulate that the British were going to use in the campaign in Europe not only white troops from India but the natives as well; also, that Japanese troops were to replace these troops in India. Of one thing there was no doubt: the British were accumulating a large store of coal at Bombay.

Malacca, the next day, showed no evidence of having been influenced by the war. However, Penang, struck the following day, was different. Here the police station and the residency had had their verandas filled in with sand bags built around steel plates with loop-holes in them, while around both buildings was a mass of barbed wire entanglement.

On leaving Penang, the ship's company again relapsed into a period of utter darkness so far as any news was concerned. The interminable discussions concerning the war continued. The Britishers, in their arguments, took the Boer War as a model for future military operations, entirely ignoring the tremendous difference in regard to the number of men engaged and the great dissimilarity of the geographical features of the two theatres of war.

H. J R.

GURKHAS IN EGYPT EN ROUTE FROM INDIA TO FRANCE

H. J. R.

GURKHAS ABOUT TO MAKE CAMP AT ISMAILIA

Finally, one morning, we entered Colombo Harbor. Here were six merchant ships which had been captured by the British. The pilot, on coming on board, said the Germans had entered Brussels, had captured Namur, were shutting the Belgians up in Antwerp and cutting off those in Liège. He also told of an engagement going on in the neighborhood of Charleroi and Mons.

After leaving Colombo, we experienced another period of twelve days without news. The captain had been warned that the German cruiser *Emden* had left an east African port some time before, and was hunting around for ships of the Allies. As a consequence, he took a course somewhat to the north of the regular one, so that he might get into the track of the British transports with their naval escorts going from Bombay to Suez. The possibility of being captured by the *Emden* caused considerable comment. Each of the few Americans on board, who being the only neutrals, received requests from other passengers to take charge of money and jewelry should she be met with. Having heard in Colombo that German cruisers had sunk several British merchant ships without taking off their passengers, the possibility of our meeting a like fate was one of the favored topics of discussion.

After a number of uneventful days, Aden was sighted early one morning. Several miles outside, a British cruiser approached which inquired whether

any German ships had been seen. The captain ran close in to the signal station at Aden. This station told him that the route was clear and that he could proceed on his way, but gave him no war news. It was quite provoking to be so close to land that the shore batteries, infantry defenses, and other details were plainly visible, and to be denied all opportunity of landing and obtaining any news.

Several days later Suez was reached at sunset. A fleet of fourteen British transports escorted by two cruisers was lying in the roadstead. This fleet had brought 15,000 British troops from India — about half of them white and the other half native. It was said that the white troops were to go to Europe, while the natives were to relieve the white troops in Egypt, who would then be sent to Europe.

The next morning in Suez, several troop trains loaded with Indian troops were seen going out. Later a battalion of Gurkhas was seen at Ismailia. These troops are hardy little men from the Himalayas; they are the best native troops in India, are full of fighting spirit, and are said to resemble Japanese troops in many particulars. One British transport loaded with white soldiers was seen going through the Canal.

On reaching Port Said, the Frenchmen were told that 150,000 Russians had come in English ships from Archangel to Scotland, thence by train through

Great Britain, and by boat across to Ostend, from which place they were going to join the Belgians in an attack on the German flank and line of communications. This cheered the Frenchmen up considerably, and somewhat offset the news learned the night before in Suez of the German advance close to Paris and south of the Marne.

In the harbor of Port Said were two British cruisers. A short distance from them were quite a number of German merchant vessels interned for the war, all flying the German flag, for Port Said was a neutral port.

From Port Said, instead of taking the usual course through the Straits of Messina and then between Corsica and Sardinia to Marseilles, the captain, not feeling sure as to wandering German cruisers, took a route which brought him close to Malta, and then close into Cape Bon, the northern end of Tunis. Malta was passed at night, and seemed to be literally bristling with searchlights, all busily engaged in searching the sea in every direction. Off Cape Bon, the ship was picked up and spoken to by the French battleship *Saint Louis* and another one too far off for us to make out her name. Two days later, the pilot was picked up off Marseilles. Though it was quite early in the morning, the French were so eager for news that they were all up waiting. When they heard that the Germans had been driven back, they were

greatly relieved and more than delighted. The old castle on the island at the entrance to the harbor was doubly pleasing to them; first, because it meant the end of their long journey, and, secondly, because they were told that it was full of German prisoners.

The harbor at Marseilles was crowded with ships, practically all lying idle. Ashore, the city had a holiday, or Sunday, appearance. In the streets were quite a number of British officers, sent there to make preparations for the landing of the British white and native troops from India.

Undoubtedly, the most delighted to arrive of the French who had been on board was a small man with a little gray-black moustache, who had done his three years' service in the French army in the early eighties. He had been in China for sixteen years, where during the Boxer outbreak he was wounded in the defense of the legations at Peking. Napoleon's old guard must have been of the same type of man. Older than any of the men called to service, he had given up a good position in China and had come home of his own free will to ask that he be permitted to serve again. Quiet and reserved, it was easy to see that he thought only of war, dreamed only of war, and that nothing could give him greater happiness than to be once more in uniform, with the medal of the Legion of Honor won in China pinned to his breast.

CHAPTER II

FRANCE AT WAR

September, 1914.

THE talk in Marseilles was of nothing but the war. While the shipping and wholesale districts had a Sunday appearance, the retail district appeared normal. The cafés everywhere were crowded. The city was full of Belgian refugeés and slightly wounded French sent there to be well out of the way. The slightly wounded were having the time of their lives sitting in cafés, the center of groups hanging on their words who were only too willing to buy them anything they might want to drink or to smoke.

The most noticeable thing about the French in Marseilles was their sober attitude when compared with their usual attitude in times of peace. Everywhere in France the seriousness with which the people take the war is striking. There is no wild talk; no café fighting enthusiasm which begins and ends in the café, and does not lead the possessor of it into a uniform and to the firing line.

Everyone is quiet, and anxious to perform any service his or her country might demand. All recognized the necessity for military control and did not complain when steps were taken by the military authorities which, while necessary from

a military point of view, interfered with the plans or likes of individuals or families. The discipline which the men received during their service in the army in the days of their youth makes them unconsciously, willingly, and without grumbling or complaining, put duty above self.

That there may be no chance of distress, the richest people in the city have banded together to prevent want. They have divided the city into districts and themselves into a corresponding number of groups. Each group is responsible that no want shall be felt among the people of its district. This, coupled with the police regulation of food prices and the *per diems* paid by the government to the wives and minor children of soldiers at the front, is to prevent misery during the coming winter.

One effect of the almost universal mobilization of the active men of the country has been to create a greater demand for labor. There being no shortage of work and at the same time fewer available men to do it, most businesses which are still running, if anything, find themselves short-handed.

The train from Marseilles to Paris, which left Marseilles late in the afternoon, was made up of crowded coaches; not only were all the seats taken but the passageways were crowded. As there were neither sleepers nor dining cars, and no certainty of being able to get food at the stations,

nearly everyone started provided with food and drink of some kind.

Instead of reaching Paris at 8 o'clock the following morning, when the train was due, it arrived at 3:30 in the afternoon. Everyone was quite content, as many fully expected the journey would take two or three days.

The crowd on the train was a mixed one — many were French reservists, recently arrived from foreign countries and bound for their regimental depôts; a few were Britishers, trying to get through to London; some were Parisians, who had fled from Paris during the battle of the Marne and who considered it safe to return since the Germans had retired.

In one compartment were a French captain and lieutenant of field artillery, who had just arrived from Morocco from which country they had been ordered to join a battery which had lost its officers in one of the fights. In the same compartment was a former British cavalry officer who had resigned before the Boer War but who went with the yeomanry to that conflict and was on his way back to try for a commission in the new army Lord Kitchener was raising. There were also two civilians neither of whom ever had seen service — one an old Frenchman and the other a middle-aged Belgian, just returning from China.

The conversation was interesting. The two

civilians believed every story of German atrocities and told with much emphasis the most extravagant tales. Nothing would satisfy them but the most bloody vengeance. All their conversation about the war was inclined to be extravagant. The two French officers and the former British officer, inclined to doubt the truth of most of the statements made, were calm and careful in all their expressions of opinion concerning the war.

From Marseilles to a point somewhat south of Lyons, where it became too dark to see, the country was beautiful. The harvest seemed to have been gathered everywhere. At all the bridges and culverts were guards made up of the older men of the territorial army. All were armed. Many had complete uniforms, but most of them had to content themselves with the infantry cap. All the stations were full of people. Most of the men were in uniform, many of whom were slightly wounded.

A wounded colonel of infantry was put on the train at one station. He had to be carried on the train, but was able to sit up, and was fully dressed. He had a new medal of the Legion of Honor on his breast. A short distance farther on he was lifted off the train, into the arms of his wife and two good-looking daughters, who were waiting for him.

At many of the stations during the night, slightly-

Courtesy Chicago Tribune

FRENCH INFANTRY IN THEIR TRENCHES

wounded men and officers boarded the train, only to get off farther up the line at some railway junction.

As Paris was approached, the number of wounded in the railway stations increased. At all the more important stations the authorities had beds placed in the waiting-rooms, and staffs of doctors and nurses were in attendance. They also had hot beef-tea and mutton-broth waiting. The food for sale to passengers passing through had a sign over it stating that the money received was for the needs of the wounded.

The closer Paris was approached, the more frequent and the longer were the stops. Occasionally trains containing reserve soldiers, horses, and supplies, bound for the front would be seen; more often, however, long trains of the wounded would be met with.

The slightly wounded were sitting up for the most part in first- and second-class coaches, many cheerfully grinning. The badly wounded were stretched sometimes on straw at the bottom of freight cars and at other times on stretchers placed in the same kind of cars. The regular hospital trains provided have been entirely inadequate to take care of the large number of wounded.

When the train entered the environs of Paris, quite a number of British soldiers and officers connected with their hospital and lines of com-

munication service were seen. These always excite the liveliest interest on the part of the French. "Look, the English soldiers!" would be heard from all parts of the train whenever any of them came into view. The British soldier will probably have the fondest memories of France, as the people press around them offering them things to eat and to drink, while the girls look on them with most ardent admiration.

The Gare de Lyon reached, everyone got off the train with his baggage as best he could.

Paris, as is proper, is taking the war seriously. With the exception of a few cinematograph halls, all places of amusement are closed. All cafés close at 9:30 o'clock promptly. The street railways stop running early in the evening. The race-courses at Longchamp and Auteuil have been turned into huge cattle and sheep ranches. All the entrances to the innermost line of fortifications around the city have been prepared for defense by the erection of barricades, the building of sandbag trenches, and the digging of ditches across the great part of the roadway. At only a few gates are vehicles permitted to enter and leave. No automobiles may leave the city except by special permit, which can be obtained only in extreme cases. Every foreigner must have a written permit from the commissary of police of his district to live in that district.

Nearly all the hotels, especially the big ones, have been closed; many have been turned into hospitals. More than forty per cent of the regular population of Paris has left, so that many houses are vacant and shut up. Except along the boulevards, the street traffic amounts almost to nothing, while at the market places and in the cheaper shopping districts, there are no crowds.

Paris has thrown aside all its gayety, and is seriously attending to its business of sending men and supplies to the front, taking care of the wounded that come back, and keeping so far as possible the more important affairs of life going. Due to excellent regulations about food supplies, food is not only plentiful but much cheaper than ordinarily.

By ten o'clock at night the streets are deserted, except for the police, an occasional newspaperman going to the telegraph office to send in such scraps of news as he may have gathered despite the vigilance of the censor, and the military police, on duty just back of the army, who delight in arresting correspondents who have slipped out of Paris.

The only other signs of life are the searchlights busily sweeping the heavens, hunting for German airships.

CHAPTER III

HOW FRANCE GOES TO WAR

September, 1914.

IN France, as in every country of the world of any importance, with the exception of Great Britain and the United States, the system of universal compulsory military service in time of peace as well as war has been adopted. By this system, men when twenty years of age, if physically fit for service, become liable. Those unfit are called *reformés;* those fit are known as belonging to the *class* of some particular year. From their twentieth birthday to the end of their forty-eighth year, they are liable to service of some kind during war. In peace, their active service commences when they are twenty, and continues for three years. During this time they actually do continuous duty as soldiers with their regiment, or other unit. At the end of the three years, they pass into the first reserve, where they remain until the end of their thirty-third year. During these eleven years, they are called out from time to time for a few days' or a few weeks' service.

These two periods — the active, and the first reserve — make up the first line of the French army, or what might be called its active army. The units of the army in peace time are below their war

strength. The idea of the reserve is that when war comes, the units are filled to their proper strength by the reservists. As in peace time the army has its proper number of officers and proper organization, all that has to be done when war comes to bring the army up to its war strength is for the reserve soldiers to report to the depôt of their regiment, receive their clothing, equipment, arms, and ammunition, and take their places in the ranks.

The number of men in the first reserve in France was so large that not only did they fill the active army up to its war strength, but enough were left over to form an additional regiment, made up entirely of reservists, for each regiment of the active army. In addition, there were still men left over who are kept at the depôts until needed to make good losses at the front. In other words, the adoption of this system has given France twenty army corps of approximately 33,000 men each at war strength, backed by twenty army corps made up of reservists, and a large number of first reservists left at the depôts to make good the losses. All these men are less than thirty-four years of age.

At the beginning of a man's thirty-fourth year, he passes from the reserve of the first line into the territorial army, where he serves until the end of his forty-eighth year. He spends the first seven years of this period in the active units of the territorial

army. After these first seven years in the territorial army, he passes into the reserve of the territorial army, where he remains until the end of his forty-eighth year.

The territorial army is primarily intended for home defense. The reserves of the territorial army are to make good losses which may be suffered by the active territorial units. These active territorial units include approximately 400,000 men. The troops of the active and territorial army belong to what is called the Metropolitan Army. One army corps of the Metropolitan Army serves in Algeria. Attached to this army corps are the native Algerian troops, and the Foreign Legion made up of white foreigners.

In addition to the Metropolitan Army, France has a Colonial Army, including both white and native troops. The native troops number roughly 50,000 men, and the white troops about 55,000 men, at war strength. A certain number of units of the white colonial troops are always kept in France. These units brought to war strength number about 40,000 men. This gives France what is practically an extra army corps for home use.

Roughly, then, France's armed strength consists of twenty army corps of the Metropolitan Army, to one of which are attached the Foreign Legion and the native Algerian troops; twenty reserve army corps made up of first line reservists; 400,000

territorials; a Colonial Army of about 55,000 white troops and 50,000 natives, of which approximately 40,000 white troops are stationed in France; and a large number of reservists at the regimental depôts and the territorial reserves.

In Europe it has been recognized for some time that by preparing for war not only are fewer lives lost because of ignorance of officers and inability of the men to take care of themselves, but, what is of more importance, perfect readiness allows the immediate striking of a powerful blow against an enemy. To be able to strike this blow as quickly as possible, there are worked out in years of peace the most minute details of the mobilization of the army—that is, putting it on its war basis; and of its concentration for battle—that is, getting it into the position from which the first blow is to be struck. Nothing is left to chance or to the last moment.

The period of mobilization extends over a number of days, known as "the first day of mobilization," "the second day of mobilization," and so on. In all the orders and instructions pertaining to mobilization, they are spoken of in this manner: each organization—that is, each unit of the army down to the smallest — has prepared a table of events in case of mobilization. In this table is included everything necessary to complete the mobilization, and to get away from the garrison.

To insure these matters being done in logical order, and without confusion, the French divide the time up into the first hour, second hour, third hour, etc. Under each hour is listed exactly what is to be done. This is carried to the extent that even the sergeants in charge of platoons have lists posted telling the steps which are to be taken; such as, for instance, what details of men the platoon must furnish, the number of men to run errands, and the time and place where they are to go.

During peace, twice a year, the troops have practice mobilizations, when they go through all the work of packing up, tying up their old uniforms to turn into the depôt, issuing the new uniforms, closing all their accounts, loading the wagons, leaving the barracks, going to the station, and loading everything on the necessary trains.

When a man has finished his three years' active service, he is given a small book, in the back of which are the instructions which he is to follow in case of mobilization. Here he is told where he must report, on which day of mobilization he must do it, and, if it is necessary for him to go by rail, what route he will have to take. The routing given in the instructions in the back of these books is the mobilization routing of the trains, which is quite different, as a rule, from the ordinary routing in peace times. This re-routing of the

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FRENCH INFANTRY ON THE MARCH

trains has also been carefully worked out in time of peace. The directions which are necessary to carry it out are kept in each railway station under seal until the order for mobilization arrives.

As it is impossible in peace time to maintain the large number of horses, wagons, and automobiles which are necessary for an army, arrangements are made by which on mobilization they are requisitioned from people in civil life. To provide for this, each year a board of officers is assembled in each district. All owners of horses and rolling stock of any kind are required to present such to this board. If these are fit for service they are given an estimated price and the owners are told to present them at a certain place on a certain day of mobilization. Lists are kept so that the military authorities are always in a position to know just what they can count on getting. On presentation at mobilization, the owners are paid the estimated price for the articles taken.

While all the details of mobilization had been worked out with the utmost care, the French were a bit anxious as to the result, because this war gave them the first opportunity to have a complete mobilization under the new system. Their foresight and preparation proved to be admirable. Everywhere throughout the country the mobilization and concentration worked quickly, easily, and with a complete absence of noise, confusion, delay, or unnecessary expense.

In most towns, the first notification of mobilization was the beating of a drum in the streets, and the reading by a gendarme of the order for the mobilization the next day.

August 2 was the first day of mobilization. All that had to be done was for the civil officials in every district to fill in the dates on the mobilization orders, which they had been holding for some time, and paste them up throughout the country in conspicuous places. Immediately the military authorities took charge of all the railway stations. The civil officials of the railroads, *ipso facto*, became members of the military train-service. The routing prescribed for mobilization was started. In every garrison throughout France, the schedules already prepared, were followed, step by step, throughout each hour of each day and throughout each day of mobilization. Each reservist the country over did exactly what his little book of instructions told him to do. The owners of horses and rolling stock presented them where they had been told to do so, and received their orders of payment, which were promptly cashed on presentation at the government pay departments in the different towns.

The military authorities virtually took control of the whole country. Everywhere rigid steps were promptly taken for the preservation of order. Cafés were ordered to close early in the evening.

The sale of absinthe was absolutely forbidden. Gendarmes were stationed in all the markets with orders to prevent dealers from raising their prices. In most places the gendarmes also had instructions to prevent any one person from buying more than an ordinary amount of food in one day. A self-imposed censorship of all the newspapers with respect to the position or movements of troops and other details of military value was insisted upon.

The mobilization did not work the hardships which would naturally be expected. It is true, a large part of the industry of the country came to a standstill. However, as the men had been taken for the army, there was not a large number of unemployed roaming around hunting for work; in fact, in some ways, there seemed to be more work than there were men to do it.

The requisitioning of horses and rolling stock has relieved the people of the burden of supporting them at a time when, in many cases, they cannot afford to do it. The payment for horses and wagons has been very close to their real value. In the cases of automobiles, the price paid was not commensurate with their real value. The more expensive the automobile, the more this was true. This worked no hardship, because the owners of such machines are rich. The possession of actual cash by the former owners of horses and wagons gave

them money to leave behind with their families when they left for their regimental depôts.

The contrast is startling between the orderly, efficient, quiet, and relatively inexpensive manner in which France mobilized and put into battle the greater part of two million men in a comparatively few days, and the noise, confusion, waste of money, waste of life through avoidable diseases, and failure to equip properly the great majority of our troops, and the placing of only 17,000 men in Cuba by our own government after a period of more than two months' mobilization in 1898.

CHAPTER IV

A TRIP TO ARRAS[1]

March, 1915.

WHEN the Germans advanced into France, they occupied, among other places, Arras, an important railway and road center of 25,000 inhabitants in the north of France, at the northern edge of the hilly country which is the watershed between the rivers of Flanders and the Somme and the Oise.

During the great flanking movement which took place in the first part of October, the German detachment was forced to leave Arras, and when this movement ended in the two armies facing each other in a long line of trenches never more than a few hundred yards apart, Arras remained in the hands of the French. To-day, it still remains in their hands, although it protrudes boldly into the German lines, their trenches occupying the territory to the north and south of Arras as well as to the east, so that they can fire into it with their artillery from three sides.

The French authorities kindly consented to show to a group of war correspondents this interesting point of their lines. We arrived at the head-

[1] This description of a trip to Arras is here given because it is typical of trips made to the front by correspondents.

quarters of the —— French army early in the morning. The streets of this typical northern French town were full of motor transports, ambulances, officers, and soldiers, and of the higher ranking officers in their automobiles.

While waiting for the passes which would permit us to travel within the region of this army, we had an opportunity to witness the issue of the daily allowance which the French government has given to the wives and children of soldiers since the beginning of the war.

The passes obtained, we took the road in the two automobiles which had been furnished us by the French authorities. These cars, incidentally, were driven by their former owners, who, having been mobilized as soldiers, had been assigned to duty operating the cars which in peace time they themselves had owned.

Everywhere along the road were signs of the life of an army. One small village would be full of cavalry horses and the men left behind to take care of them, the rest of the men being in the trenches. Another small village would be a depôt for food supplies. Here and there men could be seen loading motor-trucks, and everywhere on all the roads in the vicinity were long lines of motor-trucks either standing or in motion. On the roads, staff officers would pass by, going quickly on some mission in their automobiles. As we approached the front we began to meet troops.

In one field were several batteries of artillery, the guns limbered, the horses hitched, and the men mounted. Along a parallel road was a long line of field artillery moving toward the front. It was a cold, wet day, so all the men had on their blue overcoats with long blue capes. These overcoats, the *kepis*, very much the shape of the forage cap worn by the Union Army in the Civil War, the long coats of the horses, the horses of all colors in each battery, the general war-worn appearance of men, horses, and guns, and the mud liberally splashed over everybody and everything, strongly reminded one of battle pictures of our Civil War.

The villages just on the edge of the enemy's artillery zone were full of troops who were resting between tours of duty in the trenches. Here and there in the villages were field ambulances, generally established in some large group of farm buildings whose ample barns afforded plenty of room for the wounded. In the field ambulance the wounded remain on straw-covered ground until they can be sent to the rail-head, and thence on to the real hospitals established in the towns far to the rear. Outside of each, were parked the horse ambulances which go out at night to bring in the wounded from the dressing stations.

Finally, the headquarters of the division occupying the region of Arras was reached. Here the officer in charge of us went to pay his respects to the division commander and to ask if it were possible

to get into Arras. We could plainly hear the sound of gun fire, but it was not at all a heavy fire. The officer came back in a few minutes with another staff officer who informed us that probably we could get to Arras safely, as everything was quite calm for the moment along the front, although Arras had been shelled heavily that same morning. He added that we would make the trip in one motor instead of two, as the Germans generally let one motor go down the road into Arras without shelling it, but almost always shelled two or more motors. We took our seats in the one motor, the chauffeur opened the throttle wide, and away we went for Arras.

Off to our left, we could see what was left of the church tower of St. Eloi which had been shot to pieces by the Germans.

They told us of a village just to our north, one-half of which was in the hands of the French and the other half in the hands of the Germans. They said that for some time, the soldiers of the two armies in this village had drawn water from the same fountain between the two lines of trenches.

As we entered Arras through the gate of the old fortification built by Vauban, we could see ample evidence of the shelling that same morning. Everywhere were lying branches of trees, the walls of the houses nearby were scarred and pitted by fragments of shells, while here and there were holes made in the ground by exploding shells.

We were taken first to the building which had been the permanent hospital of Arras. As we went up the street few marks of the bombardment were to be seen. Now and then a house would be passed which had large holes through the walls, while other houses around it apparently would be untouched.

While most of the houses and practically all the shops were closed, here and there small shops could be seen still open. There were still a few civilians wandering about the streets.

The hospital, however, had been badly damaged. Large sections of the walls in different places had been completely demolished by the shell fire, which also had killed twenty of the patients.

The old *concierge* was waiting at the gate when we arrived, eager to show us around, and, above all, to show us what a narrow escape he himself had had. The side of his room faced one of the court-yards of the hospital. A shell exploded in this yard about six feet from the wall of his room, throwing black dirt all over the whitewash and making fully one hundred holes in the wall itself, against which the man's bed had rested. The *concierge* was asleep at the time of the explosion, and he was most fortunate to have escaped, as the many fragments and shrapnel bullets passed above, below, and all around his bed.

While we were in the hospital several shells burst

in the town. It is always easy to distinguish an enemy shell, because first is heard the whistling sound of the shell and then a loud *bang* as it bursts in your vicinity.

When we left the hospital, and approached the eastern part of the town, that is, the part nearest the German trenches, more and more evidences of the shelling were seen. More houses had been partially destroyed by shell fire. The belfry of Arras, a tall tower, although still standing, had its eastern face battered out of shape. Here and there were lines of barricades across the streets.

The maximum destruction was seen in the square in which stands the railway station. The railway station itself had been pretty badly mauled. The houses around this square consisted only of a mass of ruins. While it was impossible to see them, because of the many houses intervening, the German trenches were only 800 yards to the east. Occasional rifle shots could be heard, followed by the typical crackling sound small-arms bullets always make. Now and then, off in the distance, slight bursts of machine-gun fire could be heard. Most prominent of all was the unmistakable sound of French field-gun batteries firing at intervals.

From the railway station, we went to the *Grand Place*. At first, it looked as if little damage had been done. Closer examination, however, showed that there was not a house on the west side of this

square — that is, the side facing the Germans — which had not been damaged by shell fragments. Many were badly scarred, some having large shot holes in the walls.

The eastern side of this square looked undamaged, but on going through to the eastern part of one of the houses, nearest the Germans, we found the end wall had been blown in by the explosion of three large shells.

When we entered the square, all the inhabitants who had remained in town came out of their cellars where they had been living since the beginning of the bombardment. Most of them had put stoves in these cellars. The stove pipes, sticking out and giving off black smoke about the height of the front door-steps, gave the houses a most peculiar appearance.

One of the cellars entered was typical of all. Here the family had gathered its most precious possessions, all its bedding, and a certain number of cooking utensils.

The military authorities encourage the people to leave the town, but do not force them to do so. If they do leave, however, they are not permitted to come back again. To those who remain, they make regular issues of food, so that there is no danger of starvation. Of the original 25,000 inhabitants, 3,000 still remain.

While in the *Grand Place*, five small boys gathered

around us, and offered to show us the ruins of the town hall. As they appeared to pay no attention to the firing, which we could hear, or to the explosion of several German shells which hit the town just then, we asked them if they were not afraid. They said, "No, not now; we used to be at the beginning, but we have become accustomed to it." On telling them that they were like old soldiers, they were very much pleased, and became even more eager to show us where the greatest destruction in the town had been wrought.

The ruins of the town hall were the next visited. There is very little left; in fact, so little that restoration is impossible. It will have to be rebuilt completely. The houses on the square nearest the Germans did not suffer much, but those just on the other side of the town hall were nothing but ruins.

In this square, the keeper of an inn had transferred his sign advertising drinks of all kinds from its usual position just above the front door to a position just over the cellar door, from which protruded a stove pipe giving forth clouds of black smoke.

From the square we proceeded to the cathedral, which had been struck a number of times and, although not seriously damaged externally, had suffered heavily inside.

In Arras, as in other places bombarded by the Germans, the railway station, the churches, the

H. J. R.

THE TOWN HALL OF ARRAS AFTER BOMBARDMENT

city hall, and other public buildings have been the targets for shell fire. The private buildings near these also have been badly damaged.

Returning to our motor, we made as hasty a trip back to division headquarters as we had made from there to Arras. Here the division commander, a large, vigorous, determined looking man, with iron-gray moustache and hair, received us most cordially, and asked if we had been bothered by the German shells while in Arras. He said the civilians remaining in his territory gave him more trouble than his whole division, because the soldiers had learned not to expose themselves unnecessarily, while civilians seem inclined to think that simply because for the moment a certain street or place was not being shelled, it was safe. Thus they were continually being killed and wounded. He said that he had just received word that six had been killed and wounded while we were in Arras.

The division commander then told one of his staff officers to take us to an observation point on a hill, and added: "I do not think you will see even one of my guns. They are so well hidden, that although we have been here several months, the Germans have not yet found one." This proved perfectly true. From the observation point, as is usual when looking at a modern battlefield from a distance, we saw nothing but the typical rolling French country with lines of tall, straight

trees marking the roads, and the red roofs of the houses of the villages, usually in the hollow.

The staff officer named the villages, and told us which were in German hands and which in French hands. He said that opposite his troops were the 4th Prussian Army Corps and the 1st Bavarian Army Corps, and added that the Prussians were the better soldiers of the two.

The salient points of the trip were the cheerfulness of the French soldier wherever seen; the fact that although Arras juts out into the German lines, the French hold more territory here than they did several months ago; and that the bombardment had not been general but directed at certain buildings since all parts of the town have not suffered equally.

CHAPTER V

WHY FRANCE IN 1914 WAS NOT THE FRANCE OF 1870

April, 1915.

NOW that the war is in its ninth month, it is interesting to look back and note what the French have done, and to see why there is such a difference between what France has accomplished in this war and what she accomplished in 1870.

The plans of the French mobilization were made primarily to meet a German attack coming from the east. The bulk of her standing army was placed on this frontier. While the Germans attacked practically all along the French frontier, their main attack came through Belgium and Luxemburg. This necessitated at the last moment a decided change in the French plan of mobilization, since it became imperative to put the bulk of the French forces to the north and northeast, rather than to the east. Although the French mobilization worked without a hitch, the preparedness of the Germans and the suddenness of their attack enabled them to strike the French before they were quite ready. Due to this, and in spite of some local successes, the French were compelled to retreat.

As hopeful as the French were at the beginning of the war, they naturally thought of 1870. As

they retreated day after day, fighting rear-guard engagements, naturally they thought still more of 1870. Finally, however, when mostly south of the Marne, General Joffre issued his now famous order: "You have retreated far enough. Go forward, and if you cannot go forward, die where you are!" This was the beginning of the battle of the Marne. By moving large numbers of troops from extreme Alsace and eastern and southern France to the north of Paris, and then by attacking the German right flank with these troops, General Joffre compelled the Germans to retreat, and won the battle of the Marne. The British troops were present at the battle of the Marne, but played only a minor part. Their effectives probably did not exceed 40,000, while the French effectives numbered from 800,000 to 1,000,000. The French casualties were 120,000, the killed being 30,000. The French soldiers thus survived the hardest test any soldier can be put to. It is easy enough to go on after victory; but it is very hard to be defeated, compelled to retreat, and then finally to stand and whip the hitherto victorious enemy.

The retreating Germans were followed closely by the French. The position which the Germans then took up has been, and is still being, attacked by the French. For months, the armies have been engaged in that most vicious kind of warfare, termed trench warfare, formerly called siege warfare.

The demands made on a soldier by a battle in the open field are as nothing when compared with the demands made on him when fighting in trenches and mining his enemy or being mined by his enemy. In spite of this, the French soldiers remain cheerful and determined, and, incidentally, hold 543 miles out of 591 miles of trench in the western theatre of war, the British holding but thirty-one miles and the Belgians but seventeen miles.

All this is in decided contrast to 1870. Then the French started with confidence; they were quite sure they would be in Berlin before long. But their army was soon beaten. The civilians of the country sprang to arms and hurriedly organized an army imbued with patriotism and with the idea of repelling the invaders. The hastily organized army, however, was easily defeated by very small bodies of trained German troops.

It is, above all, interesting to an American to ask the reason for this contrast. In 1870, the French had a professional, long-service army; to this were added citizens of the country who took up arms for national defense in a manner not to be excelled by any patriotic people—and yet they were badly beaten. A long-service regular army, backed by untrained patriotic civilians who spring to arms when the time comes, is the system we have professed and still profess to believe in for war.

In the present war, every French soldier is a

conscript. He was not asked whether he wanted to go to war or whether he did not want to go — he simply was taken. With very few exceptions, those who are now serving in the army, when the war began, had seen two to three years' service with the army during times of peace; in other words, the French army of to-day is one made up of trained conscript soldiers, led by professional officers. With this system, of which we in America have always strongly professed our disapproval, the French have set, and are setting to-day, an example of willing patriotism in the face of the enemy which is not to be excelled.

The reason France to-day has universal, compulsory military service is because she learned in 1870 the lesson which Napoleon I taught Prussia on the battlefields of Auerstädt and Jena in 1806: "In time of peace prepare for war." George Washington told the American people the same thing many years ago, but we never have paid any attention to his advice.

It may well be asked, What does preparation for war mean? and, Why are not patriotic citizens who take up arms at the beginning of a war competent to wage it with success?

In order to wage modern war successfully, it is necessary to have men, money, equipment, and the machinery to keep on making equipment to replace what is lost or used up. Any populous, rich

nation can have these. Experience has shown, however, that the number of men necessary to prosecute successfully a big war cannot be obtained by voluntary enlistment. Both the North and South found this to be true in our Civil War, and both resorted to conscription. England to-day is finding that, notwithstanding the patriotic response of large numbers of her citizens, she cannot get enough men in her armies to prosecute the war in the way her leaders believe it should be prosecuted. All continental European nations have learned through their military history that conscription is the only way to get enough men and to insure that the burden of military service shall be distributed equitably so that all do their duty. Machinery to make equipment must be on hand when war breaks out, for the lack of equipment will necessitate delays which only operate to the enemy's advantage. To-day both Russia and Great Britain are hindered in their military operations because they do not possess sufficient machinery to manufacture the equipment for which their troops in the field now have urgent need.

Men taken for military service must have a good physique; any nation fond of out-door sports and with proper sanitation has these by the hundreds of thousands.

The men must be individually self-disciplined—that is, able to see their duty and to put the

performance of it above their personal feelings and all else. Such men are found in all walks of life, in all businesses, and in all professions.

A soldier must know how to use his weapons so well that he gets the maximum result from them. An officer must understand his business so thoroughly as to handle his men with the maximum effect and the minimum loss. These things can be obtained only by training extending over a considerable period of time.

Lastly, and probably more important than all the other considerations taken together, is the discipline of the whole—a discipline which causes the whole army to respond to the will of the supreme commander. This discipline is the thing least thought of and least understood by a civilian; it is the thing most thought of and most insisted upon by soldiers and officers who have been in action. The more fighting they have seen, the more they insist on the necessity of discipline above all other considerations. What is the reason for this insistence on discipline on the part of those having the most experience on the battlefield? The primary reason goes back to the purpose of war: either to inflict your will on the enemy, or to prevent the enemy from inflicting his will on you; generally, it is the two together.

In the beginning, each side is determined to inflict its will on its enemy. The instruments used are armed forces. Therefore, to succeed, the will

of the enemy's armed force must be broken to such an extent that that force is no longer of any value. Once this is accomplished, the enemy is helpless, for when a nation's army is defeated, all history shows that civilians who have hastily taken up arms, no matter how brave or patriotic, cannot overcome a well-trained armed force.

The question, then, is how to break the will of the enemy's army. Undoubtedly, one of the strongest instincts of a human being is the instinct of self-preservation. The way to break the will of an enemy's army is to put it in such position that the instinct of self-preservation is uppermost in the minds of the majority, and, therefore, they either will run away or will surrender. This is the primary purpose of killing and wounding in battle. It is not so much that this killing and wounding removes effectives from the battle line, as it is the effect that such killing and wounding has on the morale of the well men still left on the battle line. When this killing and wounding has had such effect that men no longer want to stay on the battlefield, or want to fight, their will is broken and they are defeated. Now discipline has for its purpose the subordination of the instinct of self-preservation and every other innate selfishness of man to the extent that soldiers and officers think of nothing but the performance of their duty, and will perform that duty even unconsciously in greatest danger.

It may be asked, Why cannot this be done by an army of men individually self-disciplined? The answer is, An army is a crowd. It is a well-known psychological fact that a crowd under excitement is very prone to psychological influence. The excitement in battle is intense. An untrained army is an untrained crowd, from a psychological point of view. Such a crowd is always peculiarly open to, and ready to respond to, the worst influences, probably because they represent the easiest course of action. This results in such an army responding readily to the bad example set by the men in whom the instinct of self-preservation is uppermost, whom we commonly call cowards. These men bolt, or otherwise fail to do their duty, and set a bad example, which, for the most part, is unconsciously followed by men around them. This is why untrained troops often are panic-stricken, and why large numbers of men who participate in these panics do not know until afterward that they have taken part in them.

A disciplined army, on the other hand, is a trained crowd. A trained crowd responds readily to the wishes of its leaders—in this case, the officers. Hence the necessity that the officers should have confidence in themselves, have sufficient training to know what to do and when to do it. It is not enough that the officers should have the desire and the will to remain under fire; they must also have

the will to go ahead. A trained officer through years of experience, study, and thought has developed a point of view which makes him forget himself, and even unconsciously concentrate all his energies, physical and mental, to the accomplishment of the proper end of all battles—the destruction of the enemy. The confidence of the officers reacts on the men and gives them further confidence. This confidence of the men reacts on the officers and increases their own confidence. In this way a tremendous will is created, which is extremely difficult to resist and still more difficult to destroy. This will is built up by the discipline of training and mental associations extending over years, and can be developed in no other way.

The French have thoroughly learned this lesson. Although individualists of the most extreme type, as is shown by their political history, they have adopted compulsory universal military service, and shortly before the war increased the term of service with the colors from two to three years. The discipline to which they have in this way voluntarily submitted—for France is a republic and there could be no compulsory service did not the people wish it—is the explanation of the spirit and worth of the French army to-day. Furthermore, it explains the marvelous way in which, at the outbreak of the war, all political differences, and no country had more of them, disappeared, and

why back of the French army to-day is found only a united people, calmly and determinedly supporting the military authorities.

War is a serious business, and, like every other serious business that men engage in, the maximum results should be demanded for the minimum expenditure. Amateurs cannot bring this about. Amateurs may succeed when opposed by other amateurs; they cannot succeed when opposed by professionals. In such a case, they will lose money and lives without result, and, what is worse, may bring about the downfall of principles which are infinitely more valuable than money or lives.

CHAPTER VI

HOW FRANCE HAS MAINTAINED A LARGE TRAINED ARMY SINCE THE BEGINNING OF THE WAR

April, 1915.

IN accordance with the pre-arranged plan of mobilization by which nothing was left to chance or to be done at the last moment, the French reserves of the active army were called out and the territorial army was mobilized. Immediately war was declared, a large number of the active reserves were taken to fill the regular army to its war strength. Others were used to organize new army corps, there being a reserve army corps for every active army corps. The balance of the reserves were kept in the depôts to make good the losses as they might occur. The territorials were organized into battalions.

When war broke out, therefore, France immediately raised her regular army, composed chiefly of men from twenty to twenty-two years of age inclusive, to its war strength, by adding to it men of from twenty-three to thirty-three, each of whom had served previously at least two years in the regular army. For every regular army corps, she organized a reserve army corps made up of men from twenty-three to thirty-three inclusive, each of whom had done at least two years' service in the army. Nevertheless, she still had left a large

number of men between thirty and thirty-three inclusive, each of whom had done at least two years' service in the army, who remained in regimental depôts undergoing additional training until they should be needed to replace losses by casualties among the troops at the front. In addition, she organized many territorial battalions made up of men from thirty-four to forty, each of whom had done at least two years' service in the army.

Back of these, she still had a considerable number of men of the territorial reserve of from forty-one to forty-eight years of age inclusive, each of whom had done at least three years' service in the army.

Not only did France have this immense number of trained soldiers to draw on, but, what is more important, she had trained officers to lead them. In the first place, in the regular army, in time of peace, France not only has enough trained officers and noncommissioned officers for the regular army at its war strength, but also a considerable number of additional officers. Consequently all the new army corps organized from the active reserve were officered from the top down, including most of the chiefs of battalions, by officers in active service. Even the remaining officers were not green men, but had had experience as officers of reserve; that is, in peace time they either had been officers of the regular service

who had resigned from that service and passed into the reserve service, or they were men who had taken special courses to become reserve second lieutenants. These reserve second lieutenants became reserve first lieutenants only after four years, provided during that time they had done two periods of service with a regular regiment. In a similar manner, first lieutenants could be promoted to be captains of reserve only after six years and after having done at least three periods of service with a regular regiment. None but captains who actually had served as officers in the regular service could be promoted to be majors of reserve, and this only after six years as captains and after having done at least three periods of service with a regular regiment, each period of service covering twenty-nine days. The noncommissioned officers of the reserve are men who have been noncommissioned officers in the active army. The officers of the territorial army are men who have spent certain periods as officers of reserve and who then have passed into the territorial army. In the lower grades, they frequently are men who have, as noncommissioned officers in the regular service, received certificates of proficiency to command a section. The noncommissioned officers of the territorials are men who have finished their service in the active reserve.

In making their plans for mobilization, the

general staff figured that due to death, absence from the country, and desertion, at least sixteen per cent of the reservists would fail to report. Instead, only two per cent failed to do so. For this reason during the first few days there was a considerable number of men who could not be equipped immediately. The average American or Britisher thinks that a conscript is unwilling to serve. The French conscripts not only were not unwilling, but hurried to report by the thousands, days ahead of the time when they were ordered to do so. During mobilization, there was a rumor that there would be no war, as matters had been arranged. Not in one case, or only in one locality, but all over France, men who had been called said, "It makes no difference whether Germany is willing to arrange matters or not, this time we must have war and settle that business once for all." In addition, thousands of Frenchmen came from all over the earth to report for military service. Many, though exempt from service, came at their own expense. During the years of peace, a considerable number of men who were in reality not unfit for military service had by hook or crook got themselves in the *reformé* class; when war was declared thousands of these came forward and asked to be taken.

Since the war began, the classes of 1914, 1915, and 1916, have been called to the colors, and now

H. J. R.

GRAVES OF FRENCH SOLDIERS ON THE MARNE BATTLEFIELD

H. J. R.

FRENCH CHASSEURS À PIED 600 YARDS FROM THE GERMAN TRENCHES

Region of Arras

the class of 1917 is being called. Not including the class of 1917, France has mobilized up to date something over 4,500,000 men.

Those of the classes recently called are young men who are twenty or will be twenty in these years. These men are sent to the regular regimental depôts. Here they immediately commence a regular course of training under trained noncommissioned officers and officers. At these depôts are likewise the officers and noncommissioned officers and soldiers who have recovered from their wounds. The French wounded, since the beginning of the war, have numbered something under 700,000. Of these, many have recovered and again are fit for service. In addition, at the regimental depôts there are the remnants of units which have suffered very heavy losses; for instance, when a company has been reduced from two hundred and fifty to twenty-five or thirty men, this remnant frequently is sent to the regimental depôt.

After the men of a new class have undergone a number of months of training at the depôt, the most vigorous are picked out. These, together with the remnants of the units which have suffered heavily, the officers, noncommissioned officers, and the soldiers who have recovered from their wounds, are organized into new regiments. The balance of the new class is sent to the front to fill up the gaps in the regiments. They wait until

the regiments are in repose — that is, have come out of the trenches for several days' rest. The new men are then assigned to their proper companies. The day before the regiment is due to go back to the trenches, the older men often make fun of the new ones, and tell them what a hard time of it they are going to have, and how they are going to be scared to death when they first go under fire. The veterans thus forget temporarily their own troubles, and the new men make up their minds that they will show the older men how well they can undergo the test.

In the early days of the war, many of the officers found that it took the reservists several weeks to settle down again to military life. They were too much inclined, especially in action, to take things into their own hands and not to pay enough attention to their officers' commands. Frequently when troops were lying down by order of their officers, men would stand up to see what was going on, or crawl farther to the front, so that a great many were shot needlessly. Others were too eager to attack and pushed forward too fast, resulting in heavy losses, which had a discouraging effect on the remaining troops. For this reason, many of the officers now favor a more rigid discipline than obtained before. All the men have settled down now, however, to the full realization of the necessity of carrying out their officers' commands.

The army corps made up of active reservists have done so well that they are no longer called reserve corps, but —— Army Corps with the proper numeral prefixed, the word *reserve* being omitted in the title. As the result of their experience in this war, many officers now maintain that, instead of having all the men of a unit come from one particular district of the country, it is better to have a unit made up of men from all parts of the country.

These are, however, comparatively minor details, and on the whole it can be said that this war has demonstrated the wisdom which the French showed after 1870, when they followed the German system of preparing in peace time an army made up of the manhood of the nation, all trained to military service and led by trained officers and noncommissioned officers. Not only has this system enabled France to put an immense trained army in the field at the beginning of the war and to keep it filled to its maximum with trained men, but it has enabled the republic to do so at a cost which is small, indeed, compared with what Great Britain or the United States would have to pay to put the same number of men in the field, and these mostly green and led by untrained officers.

CHAPTER VII

WHAT INVASION MEANS TO THE FRENCH PEOPLE

April, 1915.

THE first as well as the most important point in what the war means to the French people is that it is without exception everybody's war. It probably would be impossible to find a single family in the whole of France of which at least one member is not a soldier. To hear a woman or a child say, "My father, two uncles, my two brothers and three cousins are in the army" is not uncommon. As a result, everyone is always extremely interested in, and anxious about, what is going on. Therefore, there are not, as in England and as has been the case in the United States in time of war, thousands of families who have no direct interest in the war because none of their members is a soldier with the army in the field.

No casualty lists are issued in France. Any relative of a missing soldier, however, may, by filling out a blank furnished by the government, make inquiries as to what has become of the missing man. This blank is returned endorsed with the information that the soldier was killed in action at a certain place on a certain date, or that he is in a certain hospital wounded, or that he was last seen at a certain place, on a certain date, and probably was captured.

Information as to soldiers captured by the enemy may be had by means of the bureau established for this purpose in Switzerland. Once the prison camp in which the soldier is confined has been located, his family can write to him and he is permitted to write to them on post cards sent through Switzerland.

Anybody in France may write to any soldier in the army. The letters or post cards must be sent to the regimental depôt of the soldier. From there they are forwarded to the front, as the soldiers are not allowed to tell where they are stationed. The French government has now issued various colored post cards for the different branches of the service, so that in sorting the mail for the army, it is easy to separate the cards intended for infantry soldiers from those for artillery soldiers, or cavalry soldiers, and so forth. As may easily be imagined, the mail for the army is so enormous that in the big post-offices nearly all the boxes are marked: "Reserved for Military Mail." The soldier may write home, post free. The cards and letters have no post marks which indicate the place from which they are sent.

Every wife of a soldier who is dependent upon her husband's earnings for support, is allowed 1 franc and 25 centimes per day for herself, and 50 centimes per day for each child 16 years or under. Widows are entitled to the same allowance for them-

selves and their children. Unmarried women who are without work and have no incomes are given 1 franc 25 centimes per day. Very careful inquiries are made in order to be sure that only those entitled to it get this allowance. A common sight in any village or town is a crowd of women and children at the town hall drawing this dispensation.

Aside from the fact that practically everybody in France is a soldier, or has many relatives who are, the war is a national one, for it is being fought largely on French territory and a considerable portion of that territory is in the hands of the enemy. This brings the war home as nothing else can, because thousands of people, instead of knowing of the war only as a distant disturbance of which they sometimes read in the newspapers, are right in the midst of it; they see different phases of it daily and suffer from it directly. This is particularly true of those who live in the zone of the armies. They either must leave their houses and become refugeés or remain and be subjected to great danger, often to find themselves behind the enemy's line in territory controlled by him.

The first sign of a reverse is the crowd of refugeés one meets flocking to the rear, made up of old men, women, children, and boys too young to be soldiers. They are on foot, on bicycles, and in wagons. They bring along with them every sort of household article and wearing apparel. Some lead live-stock

of different kinds. The assortment of articles which the peasants in their hasty departure select as essential or of most value is certainly curious. Many grow tired from time to time and rest along the road, or in the fields just off the road. Sometimes at night little groups will camp in the open field around a small fire. Many have definite destinations toward which they are heading, but more have no definite objective, and just drift to the rear to get out of danger. They never seem to give any evidence of being terror stricken; quite to the contrary, they appear, on the whole, to take the entire matter with great calmness and even considerable indifference.

The unfortunate thing about a crowd of refugeés, particularly in a retreat such as preceded the battle of the Marne, is that when they enter a village they communicate their desire for flight to the people of that village, who before had probably no thought of leaving. This often results in a whole village soon being in an uproar as its inhabitants gather up their belongings and join the mass of fugitives.

As the war goes on, people abandon their homes much less frequently than in the beginning. Nevertheless, a not unusual sight in the larger towns back of the battlefield is a number of refugeés in front of the city hall surrounded by mounted gendarmes. Fearing that there may be spies among these people, they are always compelled to move on by designated

routes to towns well in the rear of the zone of the armies. Another reason is that to supply the towns near the armies with sufficient food is more or less of a difficult matter, because of the constant use of the railways by the military authorities for the supply and equipment of the armies and for other purposes. It is desired, therefore, to reduce the number of people remaining in these towns to a minimum.

Pasted in conspicuous places in all these towns are large yellow sheets of paper on which is printed in black ink an order of the following type:

HEADQUARTERS OF THE ARMIES No. 1

By order of the General Commanding the Army: By Sunday, the 1st of October, all émigrés, without exception, must have evacuated the arrondissements of Dunkerque and Hazebrouck. Only the inhabitants of the communes are authorized to live therein.

The mayors of the towns will be held personally responsible that this order is executed.

The émigrés are forbidden to return.

Any disobedience of this order will be punished immediately.

Signed: The General Commanding.

Merville, 30 October, 1914.

It is to the personal interest of these people to leave the zone of the armies, as no work is to be found there. They have much better opportunities to find work farther back in the country.

In their flight, families occasionally become separated. What happens more often is that when a family has been compelled to leave its home, the

men of that family who are in the army do not know what has become of their wives, children, and other relatives. In the districts where there are refugeés, the local paper always has a column or two, headed, "Refugeés," in which advertisements such as the following are seen:

1. ———Dunkerque seeks Madame Paul FOUQUART and her children.
2. Madame ——— of Malines informs her husband and her son that she can be found at 7 Rue Carnot, Le Portel, near Boulogne-sur-Mer.
3. The soldiers John and Joseph VAN HEMELRYCK inform their parents that they are in good health.
4. ———, refugeé from Lille, will be found at the City Hall of Ambazec, and wishes news of his family.
5. The families DOUCOURANT and DELBARRE inform their parents that they are at the house of ——— at Abbeville. They wish news of Charles and Stéphanie DOUCOURANT.

The people in the towns just off the battlefield suffer various vicissitudes. In the first place, due to the presence of the army and the absolute necessity of the army's using all means of transportation, particularly the railroads, the ordinary means of communication are entirely upset. While supplies in large quantities can be procured occasionally by rail, more often to make their purchases the local tradesmen have to drive to some town farther to the rear where communications are better. This inevitably results in an increase in prices, but seldom a great one.

These towns are always headquarters of one kind or another. They are also frequently the railhead and the point from which supply motor-trains start for the army. The *Grand Place* and other public squares, as well as the principal roads leading out of town, are the places where these supply motors are parked when not in use. Often they are the centers in which are located the evacuation hospitals; this means long strings of ambulances coming and going either to the battlefield to get the wounded or to the railway station to ship them to the rear.

The soldiers and officers who go with these activities are billeted, that is, assigned to different families throughout the town. This is something, however, to which Europeans are accustomed, and it generally entails no other inconvenience than the giving up of a bed-room to a certain number of officers or soldiers. Frequently, it means gain to the family concerned, particularly in the case of officers, because there are many things which they want and for which they always pay.

The presence of troops stimulates trade of some character, but it is not a stimulation of which the people may be sure, because once the headquarters is moved forward or back to another town, the stimulation moves to that town.

The inhabitants of these towns very often get a touch of war, as enemy aeroplanes are always

looking for towns which are the center of military activity. The *Grand Place*, particularly if filled with motor-trucks, and the railway station are always attractive targets for aeroplane bombs. As it is difficult to hit such relatively small objects from heights the enemy aeroplanes are compelled to keep, very often the bombs drop on or close to houses near these localities.

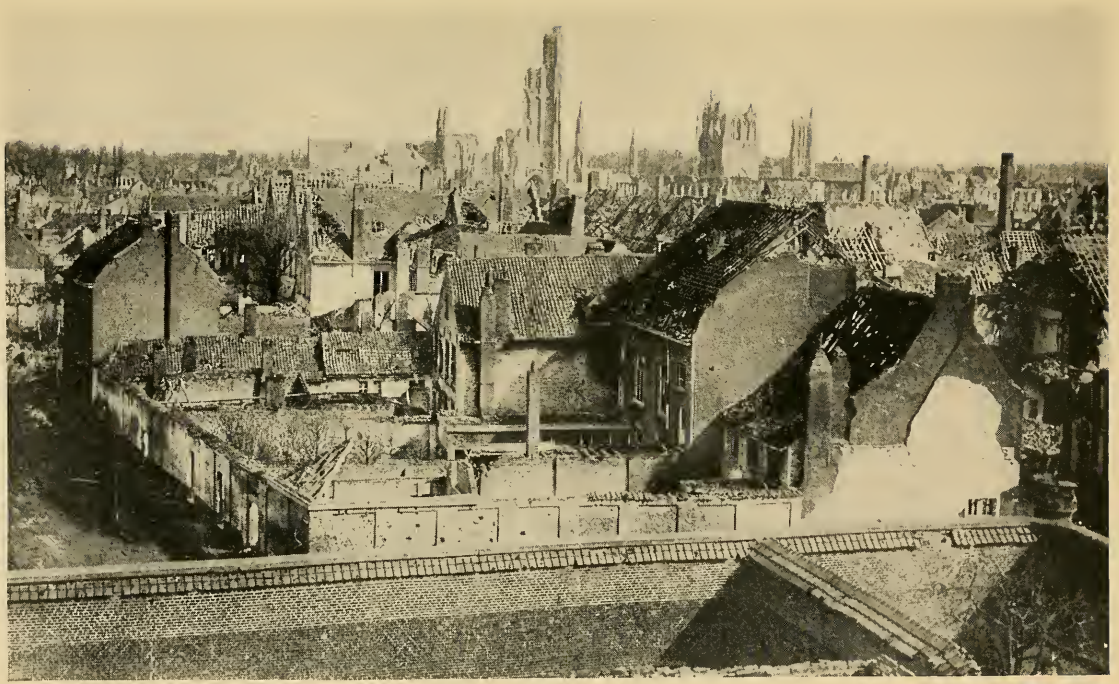
Sometimes the enemy's line approaches near enough to permit his big guns to fire into the town. Due to the long range of modern heavy guns, the infantry line can be driven back a considerable distance and still be so far away that the inhabitants of the town in question do not know this has happened until some day or some night an enemy shell explodes in the town. This occurred near B —— in October, 1914. The first shell arrived one night, a few minutes before twelve o'clock, and with true German accuracy struck the church tower, on top of which, incidentally, had been military observers for a number of days.

Once a town is within range, it is subjected to bombardment, sometimes for a short while every day, sometimes once in a while every few days. While one shell cannot do very much damage, and even a considerable number of shells dropped in a town of twenty to thirty thousand inhabitants does not cause anything like the destruction which would be commonly expected, some of them do kill

and wound people here and there. The uncertainty as to where the shells are going to land always causes a number of people to leave the town each day. Should the shelling stop for a few days, some of these refugeés will come back. The longer it continues, the more there are who go away and stay away. However, a considerable number always remain, and when matters become really bad, live in their cellars.

The people living just off, or just on, the outer edge of the battlefield, of course, come more directly in contact with the army. All their houses are used to billet troops, not only reinforcements coming up, but also the men who are resting from their tour of duty in the trenches. Some of their farms are taken as ammunition supply depôts and their barns filled with ammunition of all kinds; others are taken as field ambulances to which during the night the wounded are brought from the battlefield and from which during the day they are sent to the evacuation hospitals. Some of the wounded die in these field ambulances, and are buried in a small cemetery, usually in an orchard or garden near the house.

Defensive positions on which to fall back in case of defeat are constructed across the fields. Gun-pits are dug in orchards and gardens. Communicating trenches start back of hedges, or on one side of a garden wall and run through them.



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YPRES AFTER BOMBARDMENT. RUINS OF THE CLOTH HALL AND CATHEDRAL IN BACKGROUND

Sometimes houses enter into the scheme of defense and have to be abandoned by their owners in order that they may be made ready. Occasionally buildings obstruct the field of fire to the front of a position prepared for defense; that is, if left standing they would furnish cover for an enemy attacking the position. In these cases, they are blown up by the engineers. Trees are cut down to be used in making the trenches and the obstructions in front of them. These requisitions, and the destruction of more or less property, are hard on the people concerned, particularly when done by troops of their own army or that of their allies. However, it is inevitable.

Just as the people of the towns near the battlefield may find themselves the object of unwelcome attention on the part of the enemy's aeroplanes or artillery, so may those living in the houses or farms on the edge of the battlefield. They may not even realize that they are within artillery range, until suddenly, some day or night, a large shell bursts near or on their house.

At the beginning of the war, some of the more ignorant peasants were not entirely sure either of the British uniform or that of the Germans. In consequence, they sometimes mistook British for German troops, which frightened them very much until they discovered their error. Even now, some peasants are not always sure of friend or foe.

A case is known where some British officers in a motor-car wanted to see, near a small village just on the edge of the battlefield, the holes made by some shells from one of the big German mortars. They stopped in front of a house and asked a group of peasants where the holes were. The peasants gave directions which were not very clear, so one of the British officers who could speak French asked a man if he would please get into the motor and show them the way. The man hesitated for some time while his wife urged him not to go. Finally he yielded, got into the motor and showed the officers the holes which had been made very early that morning. He then walked off. In about ten minutes, his wife crying and wringing her hands came up to the officers and demanded to know what they had done with her husband. It transpired that when the peasant got in the motor, his wife was sure the occupants were Germans and that she would never see her husband again.

The closer to the infantry firing line, the more people and property suffer. Most country houses in France are built close to the roads. As the roads on the battlefield are frequently shelled, these houses suffer from the same fire. Just as houses on the outer edge of the artillery fire zone are turned into field ambulances, the houses on the outer edge of the infantry zone are turned into dressing stations. The destruction of property

by the preparation of defensive positions is naturally more extensive on the battlefield proper than farther to the rear.

Many houses are used by artillery officers as observation points. At the beginning of the war houses were used as shelters for troops in reserve. As a consequence, it has become quite a common practice for the artillery of both sides to fire on most of the houses in the front half of the battlefield. In spite of all this, a few of the people living in safer parts of the battlefield persist in remaining. Occasionally, men will be seen ploughing within easy range, with shells bursting perhaps seven or eight hundred yards away. One case is known of an old woman who remained in a farm-house just on the edge of the infantry zone. She had a cow left which she kept in a brick stable. She herself lived in the cellar of the house; but no matter how hot the fire, she came up every day to milk her cow. Though advised again and again by officers to leave, she would not. When last heard of, she was still safe, and so was the cow.

The inhabitants, of course, cannot remain in the center of the battlefield, where are the two infantry trenches and the district immediately back of them. In this district all the houses are entirely destroyed, or badly damaged, and frequently used as part of the scheme of defense. They are likely to be fired upon both by infantry

and artillery at any time, and often are, for long periods. In the present trench warfare, they are frequently undermined by one side or the other and blown up.

Before the main bodies of the two armies came in contact, there was considerable fighting between advance guards. In these fights, the troops of the two sides frequently passed backward and forward over the same ground. Some of the inhabitants remained during the preliminary fights and, as a consequence, sometimes had German troops for a few days, and then British or French the next few days, or *vice versa*. When the two main bodies finally met, however, and serious fighting began, they had to abandon their homes and became refugeés, going to the rear.

The towns and villages just on the edge of the infantry zone suffer greatly from artillery fire. The people who remain, while never safe from artillery fire, are comparatively secure from infantry fire so long as they remain indoors. They live, mostly, in their cellars where they find the best protection from all kinds of fire. The small villages immediately on the battle line, in some instances with the trenches of the two armies running right through them, are so dangerous and so badly torn up that none of the inhabitants can possibly remain.

Wherever the Germans have taken possession,

some of the French inhabitants have left, but many have remained. As a rule, when the Germans have approached, the mayors of the towns have posted notices telling the people to remain quietly indoors, to turn in their firearms, to make no hostile demonstrations, and, above all, to make no use of firearms, as the laws of war are very strict and severe punishment inevitably follows their violation.

The tales told by the people who have remained in towns occupied by the Germans are of two characters: one is of brutal treatment, the other of cold but fair treatment; the latter is the tale of the majority.

From all these things it easily can be seen that the people of France are fundamentally concerned in everything having to do with the prosecution of the war, in everything relating to the prime questions—When will peace be made? and, What kind of peace will it be? Since modern war, if it is to be waged successfully, demands that the manhood of the nations engaged be put under arms, the time has passed when war cannot fundamentally concern every man, woman, and child of the countries involved.

CHAPTER VIII

THE EXPERIENCES OF A FRENCH WOMAN AND HER DAUGHTER[1]

April, 1915.

AT the intersection of two long, straight, white macadamed roads, with trees on both sides, connecting four large country towns to the east of Lille in northern France, stands a fair-sized, two-story brick building, on which hangs the sign: "*Estaminet* (Country Inn) *de la* ——."

The owner, Madame —, in her sixty-fifth year, is a widow with one daughter and one son. The daughter lives with her; the son, an invalid, lives at Lille. Her only other surviving relative is a nephew, who, like all the young men of France, is a soldier in the army.

Madame remembers very well the war of 1870. While the present war has worried her a great deal, up to the present she has not suffered from it. She is full of anxiety, however, because just as she was returning from Lille, whither she went to visit her invalid son who cannot be moved, the Germans were starting to attack that city.

While wondering whether the approach of the Germans to Lille signifies fighting in her district,

[1] This is the story of the experiences of a French inn-keeper and her daughter, as told by them to the author in the town in which they had taken refuge, which was less than three miles from the edge of the battlefield.

she is looking out of the window along the road to the west, and sees a cloud of dust through which soon, she distinguishes French cavalry.

On reaching the crossroads, the main body halts and dismounts, while patrols continue down the different roads. A battery of artillery comes up and is drawn off into a field. The guns are put in position concealed behind a low hedge and a line of trees. Some officers come to the *estaminet* and ask her if she has seen or heard of any Germans in the vicinity. She answers, "No, but that the day before while she was there the Germans were attacking Lille."

Soon rifle shots are heard. Men come galloping up to the inn. The officers go out. Some cavalrymen on foot with rifles in hand lie down in the ditch along the crossroads, while mounted men with the horses of the dismounted troopers get behind the *estaminet* and the neighboring farmhouses. The battery opens fire, and the projectiles can be seen bursting on the road to the east.

Presently the sound of rifle fire is heard which swells in volume, and is followed by a number of thuds against the brick wall of the building. There is a tinkle and thud as a bullet comes through the window and strikes the rear wall of the room.

The cavalry soldiers are now firing rapidly. Madame can see a number of figures rise in the field several hundred yards to the east and run toward the French, throwing themselves down again in a

little while. Then she notices more and more men to the right and left of the first group who are doing the same thing. Some run into a barn. The batteries immediately shell the barn and set it on fire.

A slightly wounded French officer is helped into the inn and asks for water while a hospital corps man dresses his wound. Madame questions:

"Are the Germans going to get here?"

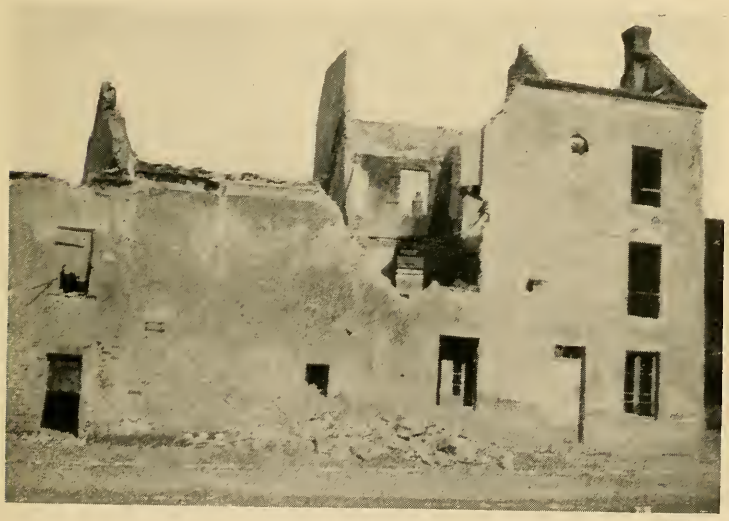
The officer replies, "Probably, because we have in front of us a superior force of German infantry, and we will have to retire in a little while."

"But what am I going to do when they arrive?" asks Madame, "Take me and my daughter with you."

"Oh, you had better stay here and take care of your property, which probably will not be damaged if you treat the Germans well on their arrival, and do what they tell you do do."

It is getting darker rapidly, and soon night falls. The firing still goes on, and from the flashes, Madame sees that the enemy is circling around to the right and left.

Soon the battery ceases firing. Later groups of three or four cavalrymen leave the ditch and run behind the house for their horses. Going to the back door, Madame sees them mount and gallop away to the west. Then for a space all is silent; but soon Madame hears whispering in the darkness and the sounds of many people moving around



H. J. R.

RUINS OF FRENCH HOUSES ON THE BATTLEFIELD OF THE MARNE

outside the house. Directly there is a loud pounding on the door, followed by a command to open it and to be quick about it. Madame, taking the little lamp which she had kept lighted under the counter so that it would not show through the windows, opens the door.

In the road are a number of German infantrymen with their rifles in a position of readiness. An officer asks: "Are there any Frenchmen in your house? Be careful to give me a truthful answer, because if you don't, it will go hard with you."

"No sir. There were, but they have all left."

"Where did they go?"

"Off in the darkness to the west."

"How many were they?"

"I don't know."

"What were they, cavalry? infantry?"

"Oh, they were cavalry."

"How many guns with them?"

"I don't know."

"How many did you see?"

"Oh, several, but I was too excited to count them."

"All right, get supper ready for three people immediately, and be sure you give us the best things you have!"

Madame and her daughter hastily prepare supper for three and bring out the best wine from their cellar.

In a little while, three officers enter and, removing

their arms and helmets, sit down at the table. At the same time, about twenty soldiers come into the room in which is the bar and proceed to make themselves at home, helping themselves to what food, liquors, and tobacco they can find.

After supper, the officers tell Madame that they are going to sleep there that night. Having a vivid recollection of the destruction of the neighboring brick barn by the French artillery, and fearing that the artillery in its new position might shell the *estaminet*, Madame already had told her daughter to take some mattresses, blankets, and everything they might need to the cellar.

She gives the officers the beds in the second story of the *estaminet*. She and her daughter retire to the cellar to sleep, while the twenty soldiers establish themselves on the floor of the bar-room.

At five o'clock the next morning, Madame and her daughter are awakened by a soldier calling to them to prepare breakfast for the officers. After breakfast, the officers and soldiers make ready to leave. One of the officers thanks Madame for her hospitality and gives her several francs.

As they depart, a large force of German cavalry arrives. Several staff officers come into the *estaminet*, and inform Madame that they are going to live there and that they have their own servants to take care of them.

Soon German infantry pass down the road going

west. Then there is the sound of artillery fire, followed by infantry fire.

Going to a back window Madame discerns sudden flashes of light, followed by little clouds of smoke in the field a short distance in back of her house. She then notices the same action to the right and left. A German officer comes to the window. After watching for a moment, he says: "The British are out there. Those are their shells."

Returning to the front room, Madame finds a number of soldiers busily engaged in fastening a telephone to the wall, and stringing wires through the windows and along the road to the east. While watching them there is a loud explosion, followed by a cloud of smoke and dust from a house about fifty feet down the road. Through the wall toward the British there is a great jagged hole. The family whose home it was are running out of the door and down the road to the east.

Madame and her daughter rush about their house, gather together their most precious possessions and take them to the cellar, expecting any moment a loud explosion when a hole would be knocked in the wall of their home.

A long day slowly passes. Madame and her daughter spend their time looking out of the window whenever they dare. They watch the soldiers and officers busily engaged in the room where the telephone has been established, go to the bar-room

to estimate the value of the things the soldiers had taken without paying for them, or hide in the cellar when the firing increases in force and they are afraid the house may be struck.

At about three o'clock, during a lull in the firing, a whirring noise is heard overhead. Some soldiers in the street commence to fire their rifles straight up into the air. Madame again runs to a window, this time to discover an aeroplane hovering above the crossroads. Then there is a flash, an explosion, and a small cloud of dust in the road about twenty feet away. Two of the soldiers in the street fall to the ground. One lies quite still; the other rolls from side to side, as he presses his hand to his stomach. Some hospital corps men pick him up and carry him down the road to a farmhouse, where a field ambulance has been established.

Having heard the sound of broken glass in the second story, Madame starts to see what damage the pieces of the aeroplane bomb may have done. She is hardly more than half way up the stairs when a loud explosion shakes the whole house and is followed by the noise of falling brick, while fragments of masonry and a cloud of dust fill the stairway. Madame, panic-stricken, runs to the cellar. When she comes up again, a soldier informs her that a British shell has struck the back of the house and wrecked one of the rooms.

With the coming of night, the gun-fire increases in intensity. From a back window long lines of flashes can be seen. There are brilliant explosions here and there — some in the air, some close to the ground, some near, some a long way off. Activity in the office in the front room increases. Orderlies and officers come and go. They speak quickly in hurried low tones.

At about eleven o'clock, two soldiers appear at the door helping a wounded officer into the room. The officer's helmet is gone. His head hangs forward and bobs around. The two men lay him on the table. His left hand is pressed tightly to his side, while through his fingers, over them, and down his gray uniform, blood oozes. A doctor and two hospital corps men arrive with a stretcher almost immediately. The doctor cuts away the officer's clothing, but the sight of the wound is too much for Madame, so she again returns to her cellar.

Through all the night Madame and her daughter go to and fro from the cellar to the main room, from which the wounded officer had been removed. On the table is a large pool of blood, which drips off into a similar pool on the floor.

Toward morning, the firing dies out; and, shortly after daybreak, it stops. Everything being quiet, Madame and her daughter sleep fitfully in the cellar until about three o'clock in the afternoon

when they are aroused by a soldier who tells them that the troops are going and that an officer above wants to speak to them. Madame does his bidding, and finds that the telephone as well as all the office equipment has been removed, that all the soldiers and all the officers, with the exception of two, have gone. One of the officers thanks her for having treated him and his soldiers so well.

Madame is glad to see them depart, but in her mind's eye she has a vivid picture of the cigars, the cigarettes, the matches, the cognac, the beer and other liquors, to say nothing of numerous chickens and a large pile of hay in the back yard, all of which have disappeared without payment. The more she thinks about it, the angrier she becomes, until, finally, she breaks out: "Who is going to pay for all the things which your soldiers have taken?" The officer replies: "Have they taken much?" Then Madame becomes voluble, and with the assistance of her daughter, both talking at the same time, gives a detailed enumeration of their losses. The officer is silent for a moment, then asks for a written list. This is hastily made out, interspersed with much talking on the part of Madame and her daughter. After looking the list over carefully, the officer takes a printed slip from his despatch case whereon he writes Madame's name, Marks 150— and his own

signature. This he hands to her — it is a bond by which the German government undertakes to pay 150 marks for supplies received. The officer bids her good bye once more and than writes on the door, in German: "Good people, respect them."

Madame and her daughter go over the house to inventory their damages. In the second story in one of the rooms there is a large jagged hole through the back wall. All over the room are bits of brick and pieces of furniture, while the walls farthest away from the hole look as if they had had the small-pox, so pitted are they by bullets and by shrapnel.

With the coming of darkness, the two women, fearing to light the lamps, close the door and the windows carefully and return to their cellar.

At nine o'clock there is a great pounding on the door, followed by a command to open it at once. This time Madame finds a patrol of about fifteen German soldiers, who demand something to eat and drink immediately. She complies, and the patrol stays until eleven o'clock, smoking and resting, when they depart without paying for what they have taken.

Two hours later, another loud banging brings the two trembling women to the door again, where they find a second German patrol. They do not enter, but merely demand to know the direction in which the German troops have gone.

The women return once more to their cellar and

try to sleep, but at three o'clock a loud banging is heard again. On opening the door, they find a third patrol of a sergeant and sixteen soldiers, who enter the house and not only demand something to eat and drink, but announce their intention to remain. The sergeant is quite suspicious. He stations two men at the back door, two at the front, others on each side of the house, while with two other men he goes through the house from top to bottom. His manner also is very rough and abrupt. The daughter becomes exasperated and says: "All the other German officers and soldiers who have been here saw no reason to suspect us, why should you act in such a brutal manner?" The sergeant looks very much surprised and says nothing. However, from then on he is more gentle in his manner toward them.

After having had something to eat and to drink, the members of the patrol, with the exception of one man left outside the house on guard, wrap themselves in their blankets, lie down on the floor and go to sleep. At about ten o'clock in the morning they wake up, and having partaken of some bread and coffee, depart.

The two women, torn with anxiety, search the road to the west to see if there is any sign of the Allies whom they hope will come, and then look eastward in an effort to discover any sign of the Germans returning.

At about noon, down the road to the west, they discern a few figures, and back of them a long, low cloud of dust. As the figures approach, they recognize the British infantry. Soon British troops are found everywhere around the crossroads. A number of officers with their servants enter the inn, and tell Madame that they intend to stay there. She and her daughter are delighted to see them, and do everything they can to make them comfortable.

Six guns are placed in position in a field not far from the *estaminet;* another battery of six guns is placed nearby. This worries Madame and her daughter. Soon they are still more worried, because to the east again is heard the sound of rifle fire, which, as before, gradually increases in volume. Then the two batteries near the house open fire. German shells commence to drop near the batteries, and then wounded British soldiers, some singly, some helping others, drift down the road from the east and pass on to the west. Some stop to rest near the *estaminet*, and Madame and her daughter refresh them with drink. The German shells aimed at the batteries drop so close, however, that the wounded soon move on. Later, the shells commence hitting the road, but to the east of the house. Then the wounded stop coming.

Throughout the afternoon the fighting goes on. At sunset it dies down a little, only to begin again

with increased fury at about eight o'clock. More British infantry go by, heading toward the east. Madame and her daughter try to get some rest in their cellar, but the noise of the fighting, particularly of the guns near them, and of the bursting shells which are trying to find the guns, coupled with their anxiety, keeps them awake, and constantly they go up to the first floor to see what is happening.

With daylight, the noise of the firing dies down considerably, but increases again later in the morning. For three days and three nights, the fighting continues. During this time each night the British guns are moved farther back, while more infantry is sent up to the infantry firing line. Late each night, strings of wounded, some walking but many being carried on stretchers, go by to a dressing station established on the road in a house several hundred yards to the west of the *estaminet*.

In the evening of the third night, the French interpreter, who is with the British staff, tells Madame that they are going to leave. During the three days, Madame has watched with increasing apprehension the steady movement of the batteries to the rear, and noted the sound of the infantry fire as it drew closer and closer. The announcement of the departure of the staff worries her so much that she begs the interpreter to ask the staff what she should do. She wishes to go with them, as she and her daughter are worn out

physically and have no courage left. The interpreter goes to the officers, and returns in a few minutes, saying: "Madame, they say that if you have had the courage to withstand what you have up to to-night, you had better remain in the cellar of your house. In this way you can keep an eye on your property, and you will be reasonably safe."

The staff then leaves after paying for everything by giving signed bonds payable by mail at a British base in France.

Madame and her daughter do not sleep at all. The British artillery, which had stopped firing during the early part of the night, has started again, and Madame and her daughter can see by the flashes that it has been moved still farther back. In the morning they notice that the dressing station has also been moved, but cannot see where. Shortly after, the thud of rifle bullets as they strike the brick front of the house again compel Madame and her daughter to run to the cellar, where they remain.

In the early part of the afternoon, after another heavy explosion, followed by a loud crash and clouds of dust, some of the small pieces of brick and mortar fall into the cellar. Madame and her daughter in terror rush up the stairs, only to find the whole back part of their house in ruins, the effect of a shell from a British battery.

They run across an open field. The sound of shells is heard overhead and also the occasional *sszpe* of an infantry bullet as it speeds past them. They reach a farmhouse about 400 yards away and pound frantically on the door. The old man and his wife who live there let them in, and the four go to the cellar. Here they spend the rest of the day and the following night, listening with anxiety to the apparently never-ending artillery, rifle and machine-gun fire.

After daylight, the firing having almost completely ceased, Madame and her daughter walk to the *estaminet*. It is in ruins, for the most part fallen into the cellar. Some of the walls are still standing half way up to the second story. In the ruins they recover a few clothes.

The firing having started up again, they instantly return to the farmhouse where they had passed the night. As they enter, a shell knocks off a chimney at the other end. The two old people, Madame, and her daughter decide to leave immediately. They put food and a few clothes in a push cart and start for M——, a good-sized town, twenty miles away, where Madame has some friends.

Pushing the cart before them, they go down a long straight road. They are soon where they no longer hear, even occasionally, infantry bullets whistling through the air or their thud as they hit something; but bursting shells sometimes hit in

the field nearby to one side, sometimes a long way off to the right or left, and occasionally, to their terror, drop some distance ahead of them.

After what seems an endless stretch of long gray road with trees on both sides, and a lifetime of pushing the cart, they finally can tell by the lessening noise of the firing and the fact that they no longer see the shells bursting ahead, to the right or to the left but only behind them, that they are off the battlefield and safe.

At eight o'clock in the evening, they reach M —— and go to the keeper of an *estaminet* from whom for years Madame has bought many of her supplies. Although he already has a number of refugeés in his house, he takes them in.

To-day, the deserted ruins of the *estaminet* stand at the crossroads very much as the two women left them. A few yards to the west is a barbed wire entanglement, and just back of it, a line of earth in front of a ditch filled with British infantry. A little to the east is another barbed wire entanglement and, just back of it, a line of earth in front of a ditch filled with German infantry.

Here and there, on the ground, around the ruins of the *estaminet*, and between the two trenches, are scattered a number of dead bodies — some British, some German, the results of attacks made by the British and Germans which have failed.

CHAPTER IX

THE BRITISH CAMPAIGN IN FRANCE AND BELGIUM

May, 1915.

PROBABLY the most noticeable characteristic of the great majority of the British people is their ignorance of what really has happened up to the present, so far as their country is concerned in this war. The class which furnishes the officers for the regular army and navy, and naturally the higher officials of the government, who are in the minority, are, of course, thoroughly conversant with the situation. But the mass of the people believe that this war thus far has been a succession of victories for the British.

When the war broke out, the British regular army serving in Great Britain was mostly embodied in what was called the Expeditionary Force — a force to be put immediately on the continent of Europe for the prosecution of the war. Like ours, the British regular army consisted of professional long-service soldiers led by professional officers.

The first part of this force arrived near Mons, in Belgium, just in time to be struck heavily by the Germans, and after considerable loss was forced to retreat in the face of superior numbers. From then on a retreat was continued which, in spite of rear-guard actions in which the British troops

displayed great determination, degenerated here and there into a rout in which all organization was lost and men abandoned their arms. This retreat continued until the British army was to the east of and slightly south of Paris.

Innumerable accounts of the heroic incidents of this retreat have been given to the British public through the press, frequently greatly magnified, until the prevalent opinion seems to be that it consisted of British victories, of which the British army was unable to take advantage because of the failure of the French to do their part. The fact that prior to the arrival of the British troops on the scene the French were engaged with the Germans from Belgium to the southern portion of Alsace, and that they had advanced into Alsace, and also into Lorraine, either is not generally known or ignored.

There is also the same ignorance with respect to the fact that while the British were fighting at Mons and south of Mons, the French were engaged along a line through Charleroi and Neufchâteau, in Belgium, and thence to the Lorraine border, in front of Metz, and so on down to upper Alsace; in other words, while the British were fighting along a few miles in southern Belgium, the French were fighting along a line two hundred and fifty miles in length.

The English, too, are generally ignorant of the fact that in the latter part of August, the pressure

which the Germans were exerting against the British was greatly relieved by French troops coming from the west and attacking the German right flank.

In the battle of the Marne, which was won primarily by the attack delivered on the German right flank by the 6th French Army, the British troops fought well, as the regulars of Great Britain and the United States always do. They did not, however, as public opinion in Great Britain seems to be, win the battle of the Marne. They were part of the main line of the Allies, and probably had on hand less than 40,000 as against the 800,000 to one million effectives of the French. In the advance to the line of the Aisne, after the battle of the Marne, the British did their share, but no more.

In the general flanking movement initiated in the beginning of the fall, for the purpose of turning the German right flank and cutting their lines of communication and thus forcing them out of France, the British troops, now greatly reinforced, were moved to the north and deployed from St. Omer in the direction of Lille. One of the objects of this flanking movement being to connect with the Belgians in and around Antwerp, a division of British infantry and one of cavalry were landed at Ostend and Zeebrugge. A British naval division, made up mostly of what corresponds to our naval reserve in the United States, was put in Antwerp.

H. J. R.

BRITISH INFANTRY ABOUT TO GO INTO ACTION NEAR BETHUNE
The men are watching German shells burst in the fields in front of them

H. J. R.

BRITISH 4.7-INCH GUN IN ACTION IN FLANDERS ON A RAINY DAY

The general conception of the scheme was excellent. The preparedness and promptness of the Germans and the lack of sufficient troops on the part of the British resulted in its complete failure. Antwerp was taken by the Germans. The divisions of infantry and cavalry landed at Zeebrugge had to retreat toward Ypres to save themselves. About the same time, the British advance from St. Omer to Lille not only was stopped but, to a certain extent, shoved back, and the Allies found themselves attacked along a line running instead of to Antwerp along the Yser to Nieuport and the sea. These attacks grew heavier and heavier as the Germans brought up more troops. Everywhere the British troops lost ground; everywhere their losses were heavy.

Had the Germans been able to keep up their attacks, there seems to be but little doubt that they would have forced back the line a long distance, or even broken through it. At this time, however, the Russian offensive in Poland had reached such an advanced stage that it no longer could be neglected, and the Germans were obliged to transfer large numbers of their troops from the line of the Yser, the region around Ypres, and the district south to the Polish frontier.

The facts that the French held a large part of the line at the Yser, that they not only backed up the Belgian troops but sent cavalry and artillery to

the assistance of the British during these heavy attacks, and that after these attacks had ceased they took over a part of the line formerly occupied by the British, are also generally unknown.

After more than two months of what amounted to inactivity so far as damaging the Germans was concerned, the British, in the early part of March, attacked them. The newspapers reported that this attack was a tremendous success, in view of the fact that the village of Neuve Chapelle and a few thousand yards of German trenches had been captured. The country at large spoke, and still speaks, of the wonderful victory of Neuve Chapelle.

This was not a simple attack on a certain portion of the German line, but a general offensive of the British, with the idea of breaking through the German line, advancing on or near Lille, and thus cutting some of the main lines of communication of the German army in France. Had this succeeded, a large portion of the German positions in France would have been precarious, if not untenable. Neuve Chapelle was chosen as the point at which the main effort to pierce the German line would be made. A large number of guns were concentrated. The infantry all along the line was to make a general attack, which was to be particularly heavy at Neuve Chapelle. The cavalry, which had drawn lots to see which brigade would lead, was drawn up in rear ready to go through the

hole which the artillery and the infantry should make for it. The concentrated fire of the artillery dislodged the Germans from their trenches at this point. The infantry rushed forward to the attack and seized the trenches almost immediately to their front, but were unable to get any farther, hence no hole was made through the German line. The British attack along the rest of the line broke down, as the German resistance was too strong. The British losses were nearly 13,000 so their attempt at a general offensive failed with considerable loss. Their artillery fire was not properly coördinated with their infantry advance, with the result that they have been accused of killing and wounding numbers of their own infantry. Their general officers in command of the higher units do not seem to have coördinated their efforts; in other words, the faults were displayed which seem inevitable in any army in which the general officers are not given the opportunity in peace time to handle large bodies of troops in manœuvres.

Up to the end of March, 1915, the small British army had lost to the Germans sixteen guns, 520 officers, and 20,307 men prisoners. In summing up, it would appear that the hiding of the truth from the British public has resulted in a foolish optimism not justified by the events.

After nine months of war, the British are still on the defensive. But for this their small regular

army is in no way to blame. In view of the unfavorable conditions under which the regular army existed in peace time, and in view of the demands, frequently out of proportion to its strength, which have been made upon it since the beginning of the war, it has acquitted itself even better than could have been expected by those who know the truth of Great Britain's lack of preparation for war. Although the British have been at war for nine months, they have not one real victory on land. The British people, however, because of the exaggeration in the press of minor successes and heroic incidents, believe that their arms have had a succession of victories, and that the German army already is practically on its knees.

CHAPTER X

THE BRITISH LAND FORCES

May, 1915.

WHEN the war broke out, Great Britain had available in England for service part of her regular army, the territorial forces, and the officers' training corps. In addition, she had in India a large number of native troops and 75,000 white regulars. In such places as Egypt, Malta, Gibraltar, Hong-Kong, and South Africa she had considerably smaller forces of white regulars; in various colonies there were native troops of different classes; while in her white colonies, such as Canada, Australia, New Zealand, and South Africa she had white militia forces, more or less of the character of our National Guard.

The greater part of her regulars at home were organized into what was called the Expeditionary Force, which consisted of six infantry divisions and one cavalry division, with the necessary artillery and auxiliary troops making a total of about 176,000 men and 486 guns.

To bring up the regular army at home to its war strength, there were about 138,000 regular reservists; that is, men who had served anywhere from three to seven years, or even longer, in the regular army. In addition, there was a special reserve

made up of 62,000 men. This special reserve consisted of men who had undergone partial training. The special reserve is a descendant of the former British militia; in other words, it consists of men who have had about as much training as our National Guard.

The regular army was a small professional army, made up of men who voluntarily enlisted. It was officered by professional officers, who were undoubtedly brave and kept themselves in good physical condition but who did not possess the professional education of the continental officers. Above all, the higher grades had lacked the opportunity of handling large bodies of troops which the general officers on the continent have had. As in our army, many of the men served long terms of years; they had made soldiering their life job.

The territorials came from the old British volunteer organizations, which, in the past, were entirely separate from the militia organizations. Lord Haldane finding these volunteer forces irregularly organized and administered, and not sufficiently under the control of the central government, succeeded in reorganizing them as territorials directly under the government administration, and by the army regulations part of the army.

Like our National Guard, they are citizen soldiers who cannot be used outside the borders of the country, except by their own consent. They are,

however, more under national control than is our National Guard, and probably, on the whole, receive more training. A certain number of their officers are regular officers. They are organized into fourteen divisions. Like all partially trained troops, they lack that cohesion and discipline which can be obtained only by continuous service extending over some period of time, and which alone can give that united stamina and will necessary for success on the battlefield.

The Officers' Training Corps consists of school and university battalions, which, under the supervision of the general staff of the army, undergo a certain amount of training as subaltern officers. While this system of training reserve officers leaves a great deal to be desired, it is far superior to the old system of appointing green men as subaltern officers.

When the war broke out, the six infantry divisions and the one cavalry division of the expeditionary force were hurried to France. As fast as territorials could be sent to Gibraltar, Malta, India, etc., white regulars were brought to Europe and organized into the Seventh and Eighth divisions, which were also sent to France. At the same time, two divisions of the Indian army, three-fourths of which are native troops and one-fourth white regulars, were brought to France, thus raising the force in France to ten infantry divisions. With the

exception of a few territorial battalions which were brought over, this was the British force up to the end of 1914. Since then, a Canadian division and a number of territorial divisions have been brought over. As so many territorials had to be sent to replace regulars in colonial garrisons, the probabilities are that not more than nine or ten territorial divisions, if that many, are in France.

As soon as the war broke out, the military authorities, realizing that they did not have anything like the number of troops to prosecute the war to a successful issue, started to raise Kitchener's new army of a million men. While there is talk of his army now being much greater than this, there is considerable doubt as to its truth. Up to quite recently, none of this new army had left Great Britain, for the simple reason that the military authorities knew it was not yet sufficiently trained and equipped.

Coincident with the raising of this new army, individuals and groups of individuals started raising a volunteer force intended primarily for home defense. These home defense battalions filled up very quickly, until the war department created a great commotion by sending circulars to them which showed the possibility of their being sent out of the country. This apparently was not at all satisfactory to the majority of the volunteers. Many said it was not legal, some even talked of hiring

H. J. R.

INFANTRY ON THE MARCH

H. J. R.

INFANTRY WAGONS ON THE MARCH

KITCHENER'S NEW ARMY

counsel and making a test case. However, the government knew from previous experience what it was about. At the time of the Napoleonic wars, the government could demand certain service from the militia which it could not demand from the large volunteer forces which had been raised at this time. Not only were these volunteer forces under no obligation to the government, but men serving in them were exempt from service in the militia, which furnished drafts to the army in the field. As a consequence, thousands of men, to escape the possibility of military service abroad, went into the volunteers. Incidentally, the government frequently found these volunteer forces to be highly insubordinate, even on questions of home defense. It undoubtedly had this experience in mind when it proceeded to make it uncomfortable for the new volunteer forces raised since the beginning of the war. The controversy has finally been settled by the volunteers agreeing to refuse to take any man who comes within the requirements of military service. Therefore, the volunteers now consist mostly of older men, and they are supposed to number about 600,000 men. There is little doubt that the majority of them are patriotic citizens, and individually men of considerable bravery. In battle, however, they probably would be about as much good as the Belgian Civil Guard turned out to be, when Belgium was invaded. Men who are

grandfathers and fathers of grown families and mostly important members of the community are entirely too individualistic to become suddenly in the face of an enemy anything more than a private whose death or continued existence is a matter of relatively small importance in comparison with the accomplishment of a military end.

Thus, after nine months of war and a great expenditure of money and energy, Great Britain finds herself with about twenty odd divisions, embracing 400,000 men, in the main theatre of war in France. Of these, eight are regular divisions. However, due to their casualties, they now contain a number of green men. Two are Indian divisions, which, on the whole, in their performance in the face of the enemy, are not equal to the white divisions. The balance are territorials and Canadians who, though enthusiastic, patriotic, and undoubtedly individually brave, are not equal to trained troops because of their lack of training and discipline. This is not a sufficient force to fight the aggressive, determined campaign which is necessary, if the war is to be brought to the conclusion the British people wish.

The whole trouble appears to have been that the people of Great Britain, like those in the United States, insist on waiting until war breaks out before raising an army, because they think that at the last moment they can raise forces, without difficulty, which will be the equal of trained continental

troops. They never have had too much respect for the latter, because they are conscripts. Then, too, both peoples have been taught their military history with the defeats left out or minimized and the victories exaggerated. They forget two things: that far from all conscripts being unwilling, the great majority of them are actuated just as much by patriotism as the volunteer, and therefore are just as willing to go; and that such troops as they may raise hastily at the beginning of a war cannot on the battlefield approach the performance of their regular army made up, on the whole, of the most adventurous part of their population who have spent years as soldiers.

This ignorance has resulted in a persistent refusal to have in time of peace a regular army of sufficient size to meet the country's need on the outbreak of war. In peace time, the army is regarded solely from a political point of view, which generally means cutting it down or depriving it of something, so as to point to a decrease in the expenditures made by whatever party happens to be in power.

Although none too large, the British regular army was reduced after the Napoleonic wars. At this time, just as before the present war, the peace party became more and more powerful, and everywhere was heard the cry that the days of big wars had passed and the era of peace and brotherhood of men had commenced. To such an extent was the

neglect of the army carried that the Duke of Wellington called attention to it in practically an open letter. However, no more heed was paid to him than was given to Lord Robert's appeal prior to the present war. The consequence was that the Crimean War found the country unprepared, and this unpreparedness, as usual, led to unnecessary and useless sufferings and loss of life. In spite of this lesson, the army was reduced after the Crimean campaign. After the Indian mutiny, it again was reduced. In spite of Lord Haldane's beneficial reorganization of the volunteers into the territorial forces, he cut down the regular army at a time when the trained soldiers of the country considered that it was greatly in need of an increase.

From the beginning of this war, the regular army has, if anything, done more than reasonably could have been expected from it. Too much has been asked of its small numbers. Had the first expeditionary force been composed of a sufficient number of trained troops, the Germans probably could have been held in Belgium. During the flanking movement, in October, 1915, had the British force consisted of sufficient trained troops, Lille probably could have been occupied, with the consequent cutting off of some of the main German lines of communication. Failing this, at least the Allied line in France might have been linked with the Belgians in Antwerp, thus saving that city and the

Belgian coast from the German occupation. The valuable aid to the maritime policy which the possession of this port and of the Belgian coast has been to the Germans is sufficient proof of how much was lost by the failure to extend the flanking movement to Antwerp. The Germans not only secured Antwerp and the coast, but kept Lille; they almost threw the British and Belgians out of Belgium, put them on the defensive by vigorous attacks, and probably would have broken their line had it not been for the impossibility of longer neglecting the Russian advance in the east.

More trained men would have meant that, with the spring, the British could have assumed a vigorous offensive, instead of which, at the present time, they are on the defensive.

Once more, this war is demonstrating what so often has been demonstrated in the past military history both of the British and of the American people—that a policy which neglects preparation for war in time of peace, which is deaf to or ridicules the warnings of trained soldiers, a policy which waits until war has arrived before getting ready and then relies on the patriotic citizens springing to arms, inevitably fails.

CHAPTER XI

KITCHENER'S NEW ARMY

May, 1915.

THROUGH a combination of circumstances, the writer happened to be on the road from Aldershot to Winchester when a division of Kitchener's new army marched over it.

The first indication of the approach of the head of the column was the excitement in a small town where several billeting officers had marked on the doors with chalk the number of men and officers who were to spend the night in each house.

Some said the division was out on a combined march and billeting practice; that is, at the end of the march, instead of camping, the men and officers are assigned to different houses where they pass the night. Others said that the division was on its way to Southampton to embark for France.

The advance guard of the division was encountered on the Aldershot road a short distance beyond the town. First came a company of cyclists. A little behind them was a battalion of infantry, four companies, of something under 1,000 men. The battalion was followed by a battery of field artillery of four guns of the regulation British 18-pounder type. Then came signal troops, which in the British army do not form a

separate corps as in the United States army but belong to the engineers. Following them were some engineers, and then a company of the royal army medical corps with its ambulances. Behind all were the wagon train belonging to the infantry and the extra caissons belonging to the field artillery.

About three-quarters of a mile farther down the road, the head of the main body was encountered. A division consisting of twelve battalions of infantry, each about 1,000 men, and thirty-six field guns with a few heavier guns, engineer troops, signal troops, royal army medical corps troops, and all the wagons and carriages which are necessary for ammunition and supplies, occupies about twelve miles of road.

First came a battalion of infantry, each company followed by a couple of pack mules carrying ammunition. After the battalion came a long column of carts for supplies. Two others followed the first battalion. Next came two batteries of field artillery of four guns each, followed by signal troops with their poles and reels of wire, and engineer troops with some pontoons — boats used for building bridges. Next came royal army medical corps troops with ambulances, and after them infantry ammunition carts, the artillery reserve caissons, and back of all, a long wagon train. All these, with the advance guard, constituted one of the three brigades of the division. Almost

immediately behind this brigade came the second brigade and following it a battery of two 4.7 guns.

The head of the third brigade was encountered going into a small town where it was to be billeted for the night. The companies were being marched down streets indicated by staff officers. After forming lines in these streets, their officers parcelled them out to the different houses, in accordance with the indications written in chalk on the doors, such as: So many men, such a company, such a battalion. Headquarters of the brigade was being established in a good-sized inn. The signal men of the engineers were busily engaged putting field telephones in different rooms, stringing the wires out of the windows and down the street. The horse transport, which filled up all one side of most of the streets, was gradually being stowed away in buildings having accommodations for wagons and horses.

The miles of troops and train on the march forming the first two brigades, and the third brigade going into billet, afforded a very interesting opportunity to see something of Kitchener's new army.

Two things were particularly noticeable: first, no cavalry was seen; second, many of the battalions were preceded by music of some kind, one of them having a fife and drum corps. Evidently the British army has learned again what the French and

H. J. R.

FIELD ARTILLERY ON THE MARCH

H. J. R.

SIGNAL SECTION OF ENGINEERS ON THE MARCH

KITCHENER'S NEW ARMY

others never have forgotten—that music in the field makes a great difference in the spirit of the troops.

The men and officers were all well clothed in the regulation British field-service uniform, which is almost the same color as the American. They were well and completely equipped. All equipment was new and apparently of the very best material. The infantry had leather belts supported by leather shoulder-belts, and with leather cartridge boxes quite similar to the German, instead of the web belts with a web pouch for every two cartridge clips which the regular British troops use. They had the same rifles as the British regulars, which up to the present has not been true of most, if not all, of the territorial battalions. The knapsack was the regulation British knapsack. Like all British infantry troops, their pack did not include a blanket. They wore the regulation olive drab cap, similar to that which our troops wear in garrison. The campaign in France has shown this cap to be a very poor head-cover, as it neither gives sufficient protection from the sun nor from the rain. Then, too, as the cloth on the top is stretched tight, it reflects the sun in such a way that these caps are easily distinguishable at long distances. For this reason, many of the officers and troops in France now wear soft covered caps. All the infantry soldiers had the British regulation entrenching tool.

The artillery had good horses which, from their appearance, had been well taken care of. The harnesses and saddlery were new and apparently of the best materials and make.

The transport wagons were mostly drawn by mules, undoubtedly from the United States. They were good-looking animals, and, like the artillery horses, had been well cared for. Like the artillery, the harnesses of all transport was new and all of good material and make.

The infantry companies were not up to full strength. The men varied in age. Many were young, apparently between nineteen and twenty, while a great number were at least forty and over. They varied greatly in height, which, after all, makes no difference. However, it was noticeable how many very short men there were. On the whole, all seemed cheerful and very willing to bandy remarks with onlookers.

The head of the column when first seen had come about twelve miles. It was quite evident that the men in it were very tired. However, of all the troops seen, only one man had fallen out. He was flat on his back along the side of the road. Their rate of march had been a slow one, as, if the information given as to the hour at which they left Aldershot was correct, the head of the column had marched eleven miles in five and one-half hours. They marched as British infantry always do —

keeping their places in the column of fours, keeping step, and with that swinging motion of the shoulders which gives the whole column the appearance of swaying in unison from side to side. This swaying motion is a peculiarity of the British infantry, which makes them recognizable even at a distance. The British method of marching is in marked contrast to that of the French infantrymen, who, like our own men, are not required to keep step nor to keep more than approximately in their places. The French infantry have a record for getting over the ground, which would indicate that their method is by far the better one.

As the column marched, there were the checks followed by the opening out and closing up again, which it is so difficult to avoid in marching large bodies of troops, and which are always such a marked feature of the march of green troops. In the batteries and wagon trains, the lead teams were not keeping proper distance, with the result that they constantly had to be turned out on the road to prevent bumping into the carriage or gun ahead.

Here and there among the noncommissioned officers were men whose campaign badges showed that they had seen service before; but the great majority were undoubtedly as new as the men around them.

The company officers all carried knapsacks, even the mounted captains. Among the officers, there

was also a sprinkling of older men whose campaign badges showed that they, too, had seen previous service. The great mass of the company officers, however, looked what they are said to be — healthy young university students and school teachers without experience or military training.

The division looked very well on the whole, considering that it was made up almost entirely of green men and officers, probably none with more than six or seven months' training, and new horses and mules. It could be easily seen that a vast amount of work had been performed and a considerable sum of money spent to get such a division together. If this division is typical of all the divisions in Kitchener's new army, probably no nation could do better than the British have done in the same time; many nations, especially those lacking the great financial resources of Great Britain, probably could not do so well in the same length of time. The troops, however, showed plainly that they were green troops. As their officers also, for the most part were green, it is surprising that they did not appear more so.

In watching them, mile after mile, it was impossible to keep from comparing them unfavorably with the new units seen in France, made up of veteran officers, veteran noncommissioned officers, and many veteran soldiers, to which the young men recently called to the colors have been assigned

only after five or six months' rigorous training in a depôt under trained officers and noncommissioned officers.

That the men of Kitchener's new army undoubtedly are brave, that they, for the most part, have good physique, that they are cheerful, and that they are well equipped, is beyond question entirely true. But that they are well trained for battle, that they have the discipline of the whole which battle conditions demand, that the officers have the confidence in themselves or the men the confidence in their officers which must be had by troops in order to withstand modern attacks and above all successfully make modern attacks, is seriously to be doubted. However far they may have progressed along these lines, they certainly have not progressed so far as the French conscripts who, after six months of arduous individual training in a depôt, are used to fill up the depleted ranks of an organization of veterans.

CHAPTER XII

CONSCRIPTION NEEDED IN GREAT BRITAIN

May, 1915.

ONCE war is declared, the great need of a combatant nation is men. To put enough men in the field to overcome the enemy's army is at once a prime necessity. In addition, the fighting force must be kept up to its proper strength — that is, new men must replace those taken prisoners, the killed, the wounded, and the sick.

That Great Britain has needed men badly from the beginning has been shown by the fact that almost immediately after the war had commenced she started the organization of Kitchener's new army of a million or more men. That the British still need men is evidenced by the continuance of the recruiting campaign, by the statements of political and military leaders, and the constant hints of the need of compulsory service. One of the best indications of the urgent need of men is that the requirement as to height has been considerably decreased and the age limit considerably extended.

An examination of the campaign up to date shows that the British army has played a minor part; it shows the Germans still on the offensive. Therefore, although the war is in its ninth month,

Great Britain has not yet fulfilled the initial requirements of putting a sufficient force in the field to put the enemy on the defensive.

Up to the present, with the possible exception of one division of Kitchener's new army, the force placed in France has consisted of regulars, territorials, Canadians, and one Indian army corps. The rest of Kitchener's new army has not been put in the field, probably primarily for the reason that as yet it has not been sufficiently well trained and equipped.

In considering Great Britain's need of men, it is not enough to think only of the campaign in France, as there are six other lesser campaigns in which she is engaged: The Dardanelles, Egypt, the Persian Gulf, German East Africa, German South-West Africa, and the Cameroons.

While she has drawn on her native Indian and colonial white troops for all these campaigns, she also has been under the necessity of keeping large garrisons in India, Malta, and such places as Gibraltar and Hong-Kong. Where she has taken regulars from these garrisons for service in France, she has had to substitute territorials, with the result that only part of the fourteen territorial divisions have been available for service in France.

The casualties in France frequently average from 1,000 to 2,000 per day; even on dull days, when firing is practically quiet except for occasional

artillery fire and sniping, there are several hundred casualties. In attacks such as the attempted general advance called the capture of Neuve Chapelle, losses run as high as 13,000 in a few days. All these men must be replaced. When the war started, there were regular reserves for the regular army, but the bringing of the regular army up to its war strength used nearly all of these. The remainder and also the special reserves had been used, some time back, in making good casualties. This means that for some time the regular army either has had to take green men to fill up the ranks or to draft men from the territorials or Kitchener's new army. Such drafts are only partially trained, and, of course, decrease the strength of the units from which they are taken.

At the beginning of the war, the territorials were, roughly, fifteen per cent below strength, so that these partially trained troops had to go into the field with fifteen per cent of their strength practically green. Since then some of these battalions have suffered casualties, which have had to be filled up by drafts from Kitchener's new army or by green men, both methods being objectionable.

When Lord Kitchener's new army is finally put in the field, it will have a daily casualty list, so that the demands for men to fill up casualties due to field service will be still greater than they are at present; in other words, Great Britain not only

needs more men to-day, but as the war goes on she will need as many as she does now, and even more because of the bigger force operating.

Undoubtedly, the world never has seen such a campaign to obtain recruits as is being carried on and has been carried on in Great Britain during the past nine months. Everywhere colored posters advertise for men. Some are merely printed; some have pictures of soldiers leaving for the front; others have pictures of soldiers in action. Each is supposed to have some theme that will appeal to the patriotism, to the sporting instincts, or to the sense of duty of the men of Great Britain. Every taxicab has advertisements for men, as well as most of the big buildings. Even the Trafalgar Monument is placarded with Nelson's signal to his fleet at the opening of that action: "England expects that every man this day will do his duty."

Members of Parliament and other leaders of the people make public speeches telling them to enlist. Ministers preach sermons for the same purpose. Special campaigns are organized in which military bands parade about the streets and finally stop at some central point where a wounded soldier or one who has been decorated for heroism will make an appeal to the men present. The newspapers are full of advertisements for men, and full of advertisements of people who want servants, but who specify that no one of military age and good

health need apply. Many have discharged servants of military age who have refused to enlist. The government has made indirect efforts to force the operatives in certain trades to join the army. Recently, an effort was made to get all grocers to compel their clerks to enlist. The government also tried to put railway clerks in such a position that they would have the choice either to enlist or to hunt another situation.

Special battalions with such names as the "Sportsmen," "Foot-ballers," etc., have been raised with the expectation that the name will appeal to a particular class. While all these means have been effectual to a certain extent, some very largely and others hardly at all, on the whole the campaign has not furnished, and is not furnishing, enough men. The foot-ballers' battalion, while practically full at the present time, embodies only 123 professional foot-ball players. One of the main reasons for this is that the clubs who own the professional foot-ballers, in much the same manner as our base-ball clubs *own* their players, discourage their men from enlisting.

Some of the towns in Great Britain, apparently forgetting the war, have advertised for men of military age to fill vacancies in their police forces. Even the government itself has not been guiltless, for it has discouraged in many ways the enlistment of the young men it employs, and in some of its

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A RECRUITING MEETING AT TRAFALGAR SQUARE, LONDON

branches has even made attractive offers for new men, which naturally have been taken.

In some instances, women are responsible for men not going. Many, thinking only of themselves, consider more often the possibility of losing a husband or a son than the need of their country. Many of the advertisements and posters for recruits are direct appeals to the women of Great Britain to put themselves aside and heed their country's need first.

Many men see no reason why they should sacrifice their business interests by going, when their rivals remain behind and profit by their absence. Many men with wives and children dependent upon them see no reason why they should leave their families, when there are still plenty of bachelors of military age who have not enlisted. Also, many married men do not feel they should go and possibly cause their families suffering, when less patriotic and more selfish married men remain at home.

While thousands do not want to go and are glad to escape going, there are thousands of others who are having a very hard time to decide what to do. They feel called by duty to their country, and at the same time they feel that their country has not yet made that call decided enough for them to sacrifice their personal interests. They feel, also, and rightly, that the present system does not insure the just distribution of the business of fighting for

the country; that it demands the most of those who are the most willing and who have the highest sense of duty and patriotism, and not only demands the least of those who are the most selfish and who have the least patriotism but rewards them for their attitude.

When it is desired to put only a very small army in the field, the voluntary system is all right, because enough men of adventurous disposition exist in a nation to send out an army of the proper size and to keep it filled up. But when a war is to be fought with a determined nation such as Germany, which puts all its strength in the field, the adventurous men of a nation are not sufficiently numerous. While a certain number can be obtained by appeals to patriotism and sense of duty, the time is soon reached when even such means fail to procure the required quota. What is worse, the volunteer system does not, at its best, produce the steady flow of men needed to make good losses. Furthermore, when men arrive a few one day, a few another, it is very difficult to train them. The older ones either are retarded by later arrivals, or the later arrivals are rushed through their preliminary work to catch up with the others.

In a system of conscription, all men of a certain age report for training at the same time. By this means, the authorities immediately know how many men they have; they also can proceed with

their instruction in a regular manner. By conscription, the duty of serving one's country is equally distributed among all. By conscription, the country decides when men are needed, and does not put individuals in the position now occupied by many Britishers, who, divided between a sense of duty which leads them to desire to serve their country and a sense of duty to their business and families, which makes them want to stay at home, do not know what to do. Neither does conscription impose service on older men who already have served the country, while it allows young men who never have served a day to refuse to do so.

No places could furnish more convincing examples of the lack of justice of such a system as that obtaining in Great Britain than do the field ambulances just on the edge of the battlefield when the wounded are being brought in. To-day in the British field ambulances are found wounded men of forty, who, after having served in the regular army a long term of years, during which time they fought in India and Africa, had settled down in civil life, have married and have had children, but who have returned to the service with this war, while thousands of young men who never have served their country a day are still going to football games and playing golf in Great Britain.

One case in particular is recalled of a man who looked older than his age, and whose shin bone had

been badly smashed in several places by shrapnel. As he was put in an ambulance, he started to cry. The surgeon said: "Don't cry, I know it hurts, but they will fix you up all right when you get back to the hospital." The man replied: "It is not the pain, sir, but I have a wife and four children, and I make my living in a factory where I use my right leg. I know I will never be able to use it again, and what about my family?" That man had served in the regular army twelve years; he had fought in four campaigns, and had been wounded before.

A careful examination of the present situation can lead only to the conclusion that the voluntary system has failed Great Britain in the present crisis. It is not the first time in her military history that it has failed. In the wars of Napoleon, she was unable to bring her armed forces up to the authorized number of two hundred and fifty thousand men, this in spite of every effort — such as diminishing the requirement as to height, increasing the age limit, the payment of bounties, and other encouragements. In 1813, the army was still 25,000 men short.

The successful ending of a war with such a vigorous, determined enemy as Germany can be brought about only, if brought about at all, by making the maximum effort possible. In proportion to her resources, Great Britain is not making

an effort in any way comparable with that being made by France. In France, at the present time, there are left only 180,000 men of military age who are not in the armed forces, and the only reason these 180,000 have not been included is that they are absolutely physically unfit.

It is not surprising that here and there, in France, criticism is heard of the meagre part taken by Great Britain. They cannot be blamed for asking why at least Kitchener's army is not sent over. The answer is simple for those who know: it is not sent because it is not ready to participate in a vigorous campaign; it is not ready because Great Britain, like America, always refuses to get ready for war in time of peace. She prefers to wait until war commences, take the great risk of being beaten before really ready to start, to suffer unnecessary casualties because of the inevitable prolongation of the war, and to run up a large debt for future generations to pay.

CHAPTER XIII

SUMMARY OF THE WESTERN CAMPAIGN TO THE END OF MAY, 1915[1]

May, 1915.

TO understand the campaign in the western theatre of war, it is necessary to consider the whole military problem which confronted Germany at the beginning of the conflict.

Due to the relative geographical situation of herself and of her enemies, Germany found it necessary to fight on two fronts, these fronts being back to back and the width of the German Empire apart. To attack the enemy on both fronts at once would have required a greater force than she possessed, besides being contrary to the fundamental strategical principle which demands that when the armies of the enemy are separated, the maximum force possible should be used against each in turn, thus giving the greatest chance of victory over first one and then the other.

It is not known exactly at the present time, but as far as can be learned from such figures as were available at the outbreak of the war, the number of trained men which Germany and Austria-Hungary together were able to put into the field at the beginning of the war was only 70,000 less than the number of trained men which Russia, Belgium,

[1] See map facing page 142.

Great Britain, and France combined could put into the field.

In examining the situation in order to decide on which front to deliver her first attack, Germany found that while Russia possessed more trained men than France, she had them scattered from the Caucasus to eastern Poland. Her troops were not as efficient as the French troops. Her Polish frontier, with East Prussia to the north of it and Galicia to the south of it, offered exceptional opportunities for attacks on the flanks of any movement made on the shortest line to Berlin. The concentration of the Austro-Hungarian army in Galicia, in front of the Carpathians, would offer such a threat to any Russian advance on Germany through Poland that it would be extremely difficult for such an advance to be made until the Austro-Hungarian army had been disposed of, or at least driven well back and put on the defensive. This, of course, would neutralize a large number of Russian troops from the beginning.

A Russian advance through East Prussia would mean that a force so operating would be separated from the main Russian army moving against the Austrians and, therefore, without support, would be exposed to defeat while trying to advance by itself through the difficult country of East Prussia; even should it succeed, it would be held up for some time by the fortified line of the Vistula, from Danzig to Thorn. In addition, it was known that the

Russians had not yet completed the strategical railways for which France had loaned them money, so that in the event of war Russia might make a rapid concentration along the Austro-German border.

All this meant that the Russian mobilization necessarily must be comparatively slow, and that even after the mobilization, some time must elapse before her advance could seriously threaten Berlin, even should it prove successful both in Galicia and East Prussia.

In examining the western theatre of war, it was found that France had a large and efficient army, with well-prepared plans of mobilization, and the railways necessary therefor, while the greater part of her German frontier was so fortified that the mobilization could be completed close to the front and an offensive blow struck almost immediately. Therefore, it appeared necessary to attempt to defeat France first, while holding Russia, and then to turn on the latter.

A well-understood strategical principle is that the way to bring a country to its knees is to defeat its army. The capture of a capital may have, and generally does have, a great moral effect, but cannot have a decisive effect as long as the enemy's army is intact. The first objective of all armies in the field, therefore, is not the enemy's capital but the enemy's army, which is to be destroyed.

The fundamental German principle is to attack

from the first with the maximum possible violence. In such an attack, all forces are so deployed that they may all come into action along a long line at the same time. This not only has the advantage of bringing the maximum force to bear immediately, but also, due to the length of the deployment, offers an excellent chance to outflank the enemy, particularly if that enemy does not use this same method and has fewer men.

In general, the French system is to develop the enemy; that is, to find where he is, how strong he is in different places, and what he is doing at those places, by means of partial attacks, while remaining on the defensive along a line it has been decided to occupy. At the same time, a large general reserve is kept so that when a weak point in the enemy's line is found, whether it be on a flank or somewhere along the center, a decisive attack can be made on this weak point with the general reserve.

The eastern frontier of France, or the Franco-German frontier, is well defended by a line of forts. While practically similar defenses were planned for the Belgian frontier, they never have been brought up to date because the military authorities, unable to get the necessary money from the government, decided it was better to finish one sector completely rather than to have both only partially finished. For this purpose they naturally picked out the sector nearest the German border.

For the Germans to attack the French only by crossing their common frontier would mean that they would have to overcome a line of powerful forts before they could engage in any really decisive campaign. If that could be done at all, it would be only with the expenditure of considerable time, and time would be of the greatest value. Also, the length of the Franco-German border was not sufficient to permit of the maximum deployment of the German troops so that all of them could be brought into action simultaneously, in accordance with the German principle of striking a hard blow with the maximum effort from the first. To make this initial deployment, she would have to advance not only against the Franco-German border but through Luxemburg and Belgium. Such an advance by her center and right offered the additional advantages of turning the flank of the French fortified line and of striking the French in that part of their country least prepared for defense. It was true that Belgium might resist, but the Belgian army was not considered to be very efficient; and even should the forts of Liège and Namur hold out, they could be invested and isolated, while the main German armies operating in this region passed between or to the south of them. This plan would likewise necessitate that a covering force be left in Belgium to keep the Belgians operating from Antwerp, or whatever part of the country might

be left to them, from cutting the German lines of communication running into France. Germany regarded the Belgian invasion and campaign, however, as minor considerations in view of the time gained and the fact that all the German forces could be deployed so as to strike the French simultaneously, thus affording an opportunity to to turn the French left flank.

When the war broke out, this was the plan followed. The first engagements were those in which the right of the German army captured Liège and Namur and drove the remnants of the Belgian army back on Antwerp and Ghent. A covering force was left to keep them there, while the main body of the German right wing moved south to attack the French and British, who had taken up a position in southern Belgium.

At the same time, the French and German centers came into contact in the Ardennes in southern Belgium, along the Luxemburg border, and in Lorraine near Thionville, while the German left and French right faced each other just across one side or the other of the border in Lorraine and Alsace. In this latter region, there had been several advances on the part of the French with the primary object of holding as many German troops as possible in this district, so that they could not be transferred to the German right or center. All this led to what might be called the first general engage-

ment of the war, which took place in the third week of August, 1915. The fighting was general from the districts of Mons, where were the British, through Charleroi and Neufchâteau, in Belgium, Thionville in Lorraine, and approximately along the Franco-German border to upper Alsace.

During this engagement, the French center took the offensive with the object of cutting off the German right, north of the Meuse, from the rest of their line. Had this movement succeeded, the right of the Germans, while being held by the British and French in front, would have been attacked by the Belgians on the right flank and the French center on their left flank. However, the offensive of the French center failed. Even with this failure, had the British and French troops on the left held their portion of the line, there might have been some opportunity of linking the Allied left with the Belgians and stopping any farther German advance. But the British and the French on the left did not hold. This, coupled with the persistent and determined attacks of the Germans all along the Allied center and left, compelled a general retreat. The rapidity of the German advance necessitated this retreat being kept up until some line could be reached where the Allies might have a prospect of holding the Germans without the danger of their left being turned. The turning of this flank would have meant that the Germans had cut

the Allied army off from Paris and that they might eventually succeed in forcing the whole Allied army back on the fortified zone on the eastern frontier, thus cutting it off from the greater part of the country, and, consequently, from all its supplies, and putting it in grave danger of being shut in in the same way, only on a much larger scale, that Bazaine was shut up in Metz in 1870.

During the retreat, there were some local successes on the part of the French, and one effort made by them from Amiens on Péronne to outflank the German right. While it failed to attain its object, this flank attack, coupled with a check which the French gave the Prussian guard and the 10th Army Corps at Guise, probably saved the British army in France from complete destruction.

The line chosen and occupied for the final stand was one running roughly due west from a point a little to the south of the center of Paris. This line had its right flank protected by the fortified zone near the Franco-German border and its left flank protected by the fortifications of Paris. To the north of Paris was being gathered and strengthened the new French army which had made the unsuccessful attempt from Amiens toward Péronne to outflank the Germans during their advance. Most of the reënforcements for this new army had been withdrawn from Alsace and the region of Belfort. The Germans mistook this withdrawal

to be a part of the general retreat, in which the French army then was engaged. The British army, which had retreated just to the west of Paris, was brought around it and put on the left of the main line, that is, just east of Paris.

On the 5th of September, General Joffre issued his now famous message, in which he said that the army had retreated far enough, that now was the time to advance, and that if they were unable to advance, at least they could die where they were.

From orders found on the dead, it has been learned that the Germans expected to continue driving the French southward, apparently in much the same manner in which they had driven them to the position just indicated.

General von Kluck, who had command of the right German army, in his advance left flanking detachments in various towns such as Amiens and Montdidier. Due to the wideness of his turning movement in the advance south, he had, when north of Paris, to close in to the east to prevent a gap developing between his army and the rest of the German army. It should be borne in mind that undoubtedly the French army was still the primary objective of the Germans, and not Paris. As long as the French troops on the extreme left and the British retreated to the west of Paris or on Paris, they were naturally followed by von Kluck, until he found that farther movement in this direction

would separate him from the main German army on his left. When he closed in and moved south to attack, with the rest of the German army, the Allies along their main line, he left approximately one hundred thousand men along a generally north and south line from Meaux northward. This was a flank guard to protect the German right flank from any flank attacks which might be made from Paris or to the north of Paris.

In moving his main force south of the Marne so as to attack along the same line with the other German armies, he left a gap between the right of his main force and the left of the flank guard occupying a line north from Meaux. In this gap he put cavalry and artillery. When the battle commenced, this cavalry and artillery was the part of the German line attacked by the British. The engagement was general all along the line of the Allied and German armies. The Germans had some success in the center. The new French 6th Army attacked von Kluck's flank guard of one hundred thousand men in an endeavor to outflank the main German army. Von Kluck summoned from the north the flanking detachments which he had left in the different towns. These troops coming from the north would have struck the left or northern flank of the new French army with perhaps serious results had it not been that they were met along an approximately east and west

line by troops of a new army and troops from the army of Paris. At the same time, von Kluck brought troops from the south of the Marne to the north of it to aid in this action on the flank. As a consequence, for the time being, he met with considerable success. However, in bringing up troops from the south of the Marne, he increased the gap which the cavalry and artillery had to hold. At the same time the German army on his left, which had lagged behind in the last days of the advance, was attacked and driven back by the French army of General Foch. This threatened the left of that part of von Kluck's army south of the Marne, while the pressure of the British and French troops on the cavalry and artillery in the gap became so strong that their right also was threatened. They, therefore, were withdrawn north of the Marne. Thus the right flank of the German army in the center became exposed, particularly as this army had succeeded in shoving back the French army to its front. The French promptly took advantage of the opportunity and vigorously attacked this flank of the center German army, with the result that it was compelled to retreat.

Then commenced the withdrawal of one German army after another, from the right to the left, due to their being held in front by the French and in danger of being flanked by the withdrawal of the army on their right; also, the extreme left

German army had its left flank threatened by an attack made on it by the French troops along the fortified zone near the Franco-German border.

As the Germans retired, they took up a position just north of the Aisne, then across it to the neighborhood of Reims, and then along a line just north of the Camp of Chalons, across the Argonne and the Woëvre, to the position held by their troops in front of Verdun. From here the line ran diagonally to a position south of that portion of the Franco-German border nearest Metz, and then approximately along the border to upper Alsace and the position held by the French there during the battle of the Marne.

The Allies followed up the Germans, and commenced attacking them in their new position which, from its strength in field fortification, was probably, at least partially, prepared beforehand. The engagements along this new line are generally spoken of as the battle of the Aisne. Fighting has continued along this same line from that time to the present.

About the middle of September, the French initiated a flanking movement with the object of turning the German right flank. Such a movement offered a number of attractions. In the first place, it was only natural that the German morale should have suffered by their defeat on the Marne, particularly after such a long-continued victorious

advance. If they could be compelled by a flanking movement, such as that made during the battle of the Marne, to retreat again, not only would they be pushed farther out of France but their morale would suffer seriously because of such a continuance of their retreat.

The principal German lines of communication came down on their extreme right flank and therefore were very vulnerable to a flank attack. The Belgian army still held Antwerp and from there could threaten the German lines of communication passing through Belgium. The French flanking movement, if continued, ultimately would join with the Belgians in front of Antwerp, thus uniting the Allies and threatening still more the German lines of communication and flank. Such uniting of the two forces was particularly desirable from a British point of view, because the Germans would be shut off from any possibility of reaching the sea-coast. Also, the British army, if moved from the neighborhood of Soissons to the north and allowed to participate in the flanking movement, would be closer to that part of the sea-coast nearest to Great Britain and thus more easily supplied and maintained. Not the least advantage of this flanking movement would be that it would prevent the left flank of the Allies from being turned and the possibility of their again having to take a choice of retreating or perhaps being cut off from Paris.

The 2nd French Army initiated the flanking movement. It was met by the Germans, however, and pushed back somewhat from the position it originally attempted to take. The 10th French Army came in on its left in the region of Arras, but also was met by the Germans and pushed back somewhat.

The British army was removed from its position in the line near Soissons and sent around by train to the region of St. Omer, where it detrained; its objective was through Lille to the east.

In the beginning of October, the Germans apparently saw the object of this flanking movement, for they commenced to attack Antwerp and at the same time sent considerable bodies of cavalry to the west of Lille.

The British sent a royal navy division to reinforce the Belgians at Antwerp, and later landed a division of infantry with one of cavalry at Zeebrugge and Ostend. These two divisions with six thousand French sailors got as far as Ghent. By this time, however, Antwerp had fallen. The Germans promptly advanced from Antwerp. The French, British, and Belgian forces in the neighborhood of Ghent were compelled to retreat rapidly toward the Franco-Belgian border.

The German forces in front of Lille consisted primarily of cavalry and artillery supported by some infantry, with the consequence that in this

part of the line the Germans were not as yet prepared to meet the advance of the British army and the French troops also in that district. In spite of this, the Germans did not hesitate to press on to the coast and to attack, on October 16–19, the Belgians and French who held the line from the coast southward in the direction of Ypres. This prompt action on the part of the Germans, although undertaken at the risk of having a hole broken through their line in the neighborhood of Lille, gave them possession of practically all the Belgian sea-coast.

Shortly before this the British had driven back the German cavalry in front of Lille and had progressed to within a short distance of that place. They were met, however, by the main German forces which attacked them and compelled them to fall back somewhat. About the same time, the British and French succeeded in putting enough troops in front of Ypres to complete the line which now extended from the Oise to the sea.

The Germans brought up more troops, and, while attacking more or less the whole of the line, made their heaviest onslaughts during the latter part of October and up to the 10th of November in the region in front of Ypres and some distance to the south. Here they succeeded in pushing the line back somewhat along a good part of the front.

By this time, the last Russian offensive move-

ment had practically reached the Polish-German border. Some Russian cavalry even had crossed into Silesia. The abrupt cessation of the German attacks in the neighborhood of Ypres which, while causing the Germans heavy loss, were at the same time slowly gaining ground, and the prompt and vigorous renewal of the German offensive in Poland, starting about the 13th of November, leaves but little doubt that it was primarily the Russian diversion which stopped the German advance through Ypres.

During the period of this flanking movement, two attempts were made — one on the part of the Germans and the other on the part of the French — to break each other's line in that section of the theatre of war not having to do with the flanking movement. The German movement was made in the latter part of September, and was a push forward south of Verdun in the neighborhood of St. Mihiel, where they succeeded in crossing the Meuse and establishing themselves on the west bank. This position they have held ever since. The French movement was an attempted advance about the same time in the Champagne district, which did not meet with success. It is not yet known whether either one or both of these movements was a serious attempt to break the enemy's line, or merely movements to keep troops from being sent to take part in the flanking movement then going on.

With the cessation of the German attacks, both sides settled down in their trenches along the 591 miles of line running from the sea north of Nieuport to upper Alsace, near the Swiss border. Here, in general, they have remained up to the present.

The Belgians were exhausted and badly in need of reorganization; in fact, they had been withdrawn from the line altogether and their places taken by French troops about October, 1914. Since then, they have taken over a part of the line between Ypres and Nieuport; French troops are on both their flanks. The British army, which was practically entirely made up of what was left of the regulars, had suffered heavy losses and was badly in need of reinforcement. The regiments since have been brought up to their full strength and the army corps reinforced by a number of territorial divisions. Due to this reinforcement, they again have taken over that part of the line which, because of their heavy losses, they turned over to the French after the battle of Ypres. The French settled down immediately to attack the German entrenched positions by methods employed in siege warfare. In this way, they have made appreciable gains in a number of localities.

The Germans, busy in Russia, have been content to remain on the general defensive in the western theatre of war. However, they have not hesitated, from time to time, to make local attacks. One

of these attacks was made in the region of Soissons, which resulted in the French being pushed south of the Aisne. Like the French, they also have engaged in siege warfare. The French have made two local attacks, one in the Champagne district and the other near Péronne; both, at first apparently successful, resulted in no great gain.

In the early part of March, the British made what was intended to be a general attack along their line with Lille as the objective. This attack, however, broke down with heavy loss and resulted only in a gain of one village and several thousand yards of trench. Recently the British and French line north of Ypres has been driven back somewhat by a German attack.

Now that the spring has arrived and that the bad condition of the ground can no longer be given as an excuse for lack of movement, the question in the western theatre of war is, Will an offensive be attempted? It seems generally to be believed that the Allies are content with holding the Germans in the expectation of gradually wearing them down without having to assume a general offensive and suffer the enormous losses which inevitably would result.

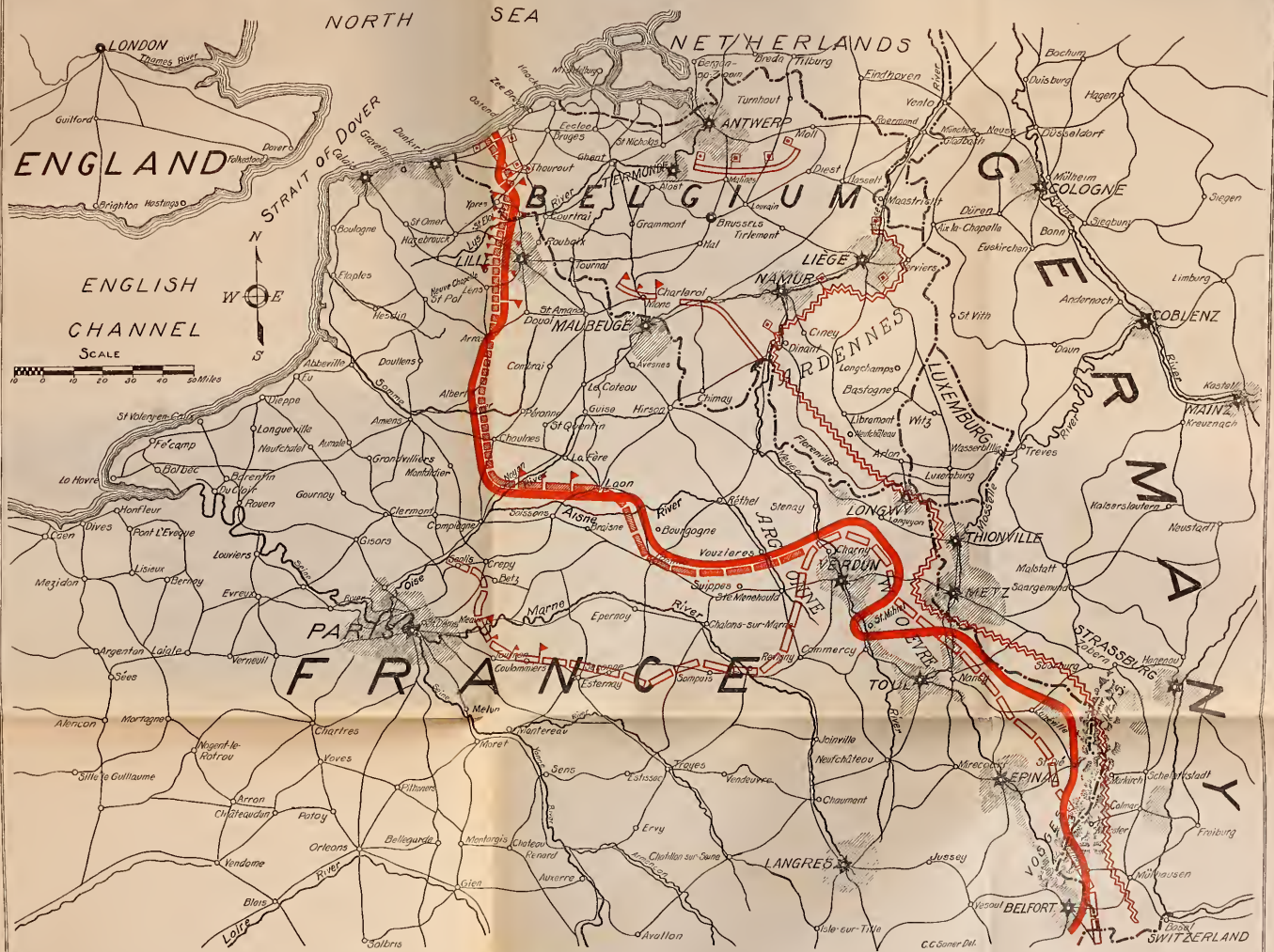
In summing up the campaign in the western theatre to date, it is found that Germany failed in her primary object of quickly and decisively defeating the French army and with it the small

British one. The Allies on their part failed to drive the Germans out of France by their direct attacks along the line of the Aisne and on to Verdun. Their flank attack failed to cause the Germans to retreat from their position along the Aisne and failed in its object of joining the Belgians in front of Antwerp.

The Germans captured Antwerp and drove the Allies almost entirely out of Belgium, thus gaining practically all the Belgian sea-coast. They compelled the Allies to abandon their offensive for the defensive along all the northern part of their flanking movement, the Germans starting an offensive which had for its object the northern French coast with the ports nearest England. This new German offensive failed probably primarily because of the necessity to stop the Russian advance in the eastern theatre of war.

The German forward movement at Soissons, the British recently attempted advance, and the two attempted French advances of recent date, all show the possibility of breaking the present intrenched lines occupied by the two hostile armies in the western theatre of war. To do this, however, involves considerable loss. To hold and enlarge a hole in the line made by this method would necessitate much greater loss. The fact that throughout the winter the Germans, because of their offensive in Russia, have remained on the

defensive in the western theatre of war, but have lost practically no territory, and that with the beginning of the spring they are still strong enough to resume the offensive, at least in one part of the line, would seem to indicate that a continuation of the present method of using siege warfare to gain ground here and there along the line will necessitate a considerable period of time to bring about any decisive result, if it ever does. The present situation in the western theatre of war indicates that a determined, aggressive offensive all along the line kept up regardless of loss, in the same way that General Grant fought his campaign from the Wilderness on, is necessary if a decisive result is to be produced within the next few months.



MAP SHOWING

THE CAMPAIGN IN THE WESTERN THEATRE OF WAR

AUGUST, 1914–MAY, 1915

To Accompany

"WHY PREPAREDNESS"

By

CAPTAIN HENRY J. REILLY

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THE campaign in the western theatre of war from August, 1914 to May, 1915, may be divided into five general periods:

First General Period — August 1–August 22, 1914

(a) First line of conflict and preliminary battles.

(b) The advance of the German right flank through Belgium, resulting in the Belgian army being forced back on Antwerp.

Second General Period — August 22–September 10, 1914

The advance of the Germans southward into France, ending in their defeat at the battle of the Marne.

Third General Period — September 11–September 30, 1914

The advance of the Allies northward from the Marne, stopped by the Germans at the battle of the Aisne.

Fourth General Period — October–November, 1914

The attempt of the Allies to outflank the Germans; the fall of Antwerp; and the failure of the German drive on Calais, marking the end of the German offensive in the West.

Fifth General Period — December 1914–May, 1915

Period of trench warfare from the North Sea to Switzerland.

KEY

First General Period

(a) First line of contact of the German and Allied troops.

(b) Position of the German and Allied troops at the end of the German advance through Belgium.

Second General Period

Position of the German and Allied troops at the battle of the Marne.

The Belgian position in front of Antwerp remains practically the same as during the second phase (b) of the first general period

Third General Period

Position of the German and Allied troops at the battle of the Aisne.

During this period the line from Verdun southeast through Vosges Mountains remains practically the same as during the battle of the Marne. The Belgian position in front of Antwerp remains practically the same as in the second phase (b) of the first general period.

Fourth General Period

Approximate line of conflict during the flanking movement following the battle of the Aisne.

Fifth General Period

Line of German and Allied trenches: both armies on the defensive.

British and German troops.

Belgian and German troops.

All troop positions not marked as British or Belgian are French and German lines.

Fortress and fortified area.

International boundary line.

PART II

SWISS PREPAREDNESS FOR WAR

CHAPTER XIV

THE MILITARY PREPAREDNESS OF THE SWISS

June, 1915.

SWITZERLAND is an island of peace entirely surrounded by war. The natural lines of advance of any German army in an attack on Italy would be by way of Switzerland; the same would be true of an attack by Italy against Germany. Should Austria-Hungary and France try to get at one another, Switzerland would be in the line of advance. Just as Belgium by its geographical position offers a natural line of advance for a German movement around the French left flank, or *vice versa*, so Switzerland offers one for a German movement around the French right flank, or a French movement around the German left flank.

For many years Switzerland has recognized the fact that in times of great stress, when the future of whole peoples may depend upon the outcome of war, armed force is the only means of maintaining, inviolate, territory, even though neutral, which offers strategic advantage to one or the other or both of the belligerents. As a consequence, Switzerland has a militia army raised, maintained, and trained by means of compulsory universal military service. Every Swiss citizen becomes liable to military service in his twentieth year and remains

liable for a period of twenty-eight years. During his first year of training, the citizen takes the recruit's course; this lasts for forty-five days in the infantry, fifty-five days in the field artillery, and eighty days in the cavalry. When he completes satisfactorily this recruit course, he is assigned to the *élite*, or active, army. An infantryman remains in the *élite* twelve years, during which time he is called out for sixteen days' service every alternate year. An artilleryman remains in the *élite* twelve years, during which time he is called out every alternate year for eighteen days. Cavalrymen remain in the *élite* eleven years and are called out every year for ten days. On finishing the service in the *élite*, men pass to the *landwehr*, where they remain until the end of their twenty-eighth year of service. During this time, if in the infantry, they are called out every fourth year for five days, and, if in the artillery, six days. Thus the total period for a private of infantry is only one hundred and twenty-five days during his first thirteen years of service. When not undergoing training, the Swiss soldier draws no pay; in fact, he is really a civilian. He retains in his possession, however, his clothing, arms, and equipment, and must each year go through a course in target practice. All able-bodied Swiss citizens who are not exempt from service but who escape the regular training, due to the impossibility of including the numbers who

come of age each year, are embodied in the *landsturm*. The age limit for this category of troops is from seventeen to fifty inclusive. Volunteers under seventeen and over fifty years of age may join the *landsturm*. Recognizing the fact that military service is a proper charge against citizenship, the Swiss government collects an annual tax from all citizens who, for any reason, are exempted from service in the *élite* or *landwehr*.

When the war broke out, the Swiss immediately recognized the possibility of their neutrality being violated by one or more of the belligerents. As a consequence, they mobilized a considerable portion of their troops at once along the French, the German, and the Austro-Hungarian borders. When Italy entered the war, they mobilized along the Italian border. They likewise built trenches and gun pits along all these frontiers. As the plans for all these mobilizations and field fortifications had been worked out carefully in time of peace, there was no delay, confusion, nor waste of money, as is inevitably the case when preparation for war is left until the last moment.

In time of peace, there is no general officer in command of the Swiss army, the highest rank being that of colonel. When mobilization was decided upon, the Federal Council elected Colonel Ulrich Wille, general and commander-in-chief.

General Wille has had a long, honorable career

as one of the permanent corps of officer-instructors maintained at all times by the Swiss. He started as an artillery officer. For a number of years he served in the German army, as many officers of Switzerland and other countries frequently do. This does not mean that he actually was an officer in the German army, but that, due to the courtesy of the German government, he was allowed to serve with a German regiment. Later he became chief of cavalry in the Swiss army, then the commander of an infantry division, and finally the commander of the second army corps. Because of his experience in all branches of the army, his long service, and his well-known ability, the officers and men have the utmost confidence in him.

In an interview which the General was kind enough to give the author, he emphasized the facts that the war had amply demonstrated the necessity of universal service as the foundation of any military system; and that confidence of the men in themselves, in their superiors, their subordinates, and their comrades is of fundamental importance, and can be achieved only by sufficient training and discipline.

The General told how the Canton of Berne was responsible for the beginning of the present system. During the time of Frederick the Great, the ruler of the canton decided that all citizens should do certain military service each year. He, therefore,

Courtesy Chicago Tribune

SWISS INFANTRY ON THE MARCH

wrote Frederick asking him to send him one of his generals in order that the citizen soldiery might be trained properly. After investigating matters, the general reported to the ruler that he could do nothing. Upon being asked the reason, he replied: "Why, your men only have to serve one day a year, how can I teach them anything in that length of time?" General Wille laughed heartily when he had finished telling the story, and then said: — "However, that was the beginning of the present system and is just one step ahead of what you have done in America, because, while you recognize the right of the State to compel service in time of war, you have not yet given the citizen the chance to be a good soldier in war by making him train in peace."

He then added: "It is impossible to put too much emphasis on the necessity of confidence and the fact that such confidence can come only from adequate training and, above all, from discipline. This confidence must exist from top to bottom, and from bottom to top. The leaders must know that their subordinates have such confidence in them, in themselves, and in their men, that if a mistake is made, the feeling of confidence will so operate against the slightest tendency to confusion or panic that everything will right itself; this because of the determination which officers and soldiers possessing such confidence inevitably show, no matter what may be the battle conditions they

are called upon to face. The best guns, the best rifles, the best equipment, and the best of everything else are of no value unless accompanied by an expert knowledge of how to use them and, above all, by a discipline which will insure their being used effectively in the midst of, and in spite of, the greatest danger. Training can only come with time. This is even more true of discipline. Good officers are of the utmost importance. It is simply impossible to make them quickly. The right sort are the result of long years of arduous training and work.

"The United States in the possession of West Point has a splendid institution which is turning out the right kind of officers. When the time comes that America decides really to prepare, this institution should be enlarged so that a sufficient number of officers can be graduated from it. In addition to officers, a large number of good noncommissioned officers is absolutely necessary. Like the officers, these cannot be obtained quickly. To be a good noncommissioned officer, a man must have had long training and have demonstrated his ability to handle men. This and all other wars have demonstrated the supreme importance of discipline. Due to the extended front occupied, the greater length of time in which a soldier is engaged in any one action, and the greater moral effect of modern projectiles, discipline is even of more importance than ever.

"The chief drawback to the Swiss system is that the length of service is not sufficient to give the discipline which should be had. The whole military history of Switzerland consists of a continued increase in the length of service required. The present mobilization has given the first opportunity for a general and thorough tryout of the current system. It has shown that still further increase in the length of service should be made. Some persons, in arguing against this, state that Germany has decreased the period of service from time to time. The answer to this is that Germany's position compels the possession of a large army. Because of the expense of maintaining such an army, the length of service has to be as short as possible consistent with the minimum training necessary. The results produced are good because of the confidence and ability of the corps of officers and noncommissioned officers. This confidence and ability have been produced by long, arduous, and continuous training over a period of many years. The officers also can be allowed considerable initiative because their superiors know they are well trained. Where officers are not so well trained, they cannot be allowed this initiative because, due to their ignorance, they are apt to go in the wrong direction. As a consequence of the possession of this excellent corps of officers and noncommissioned officers, the German soldier during his time of service gets an

intensified training and discipline which could not be possible under other conditions."

The General closed the interview by stating that it was a great mistake to think that an efficient army can be built up quickly, no matter how great the material resources or how excellent the individuals who might make up the personnel. He stated that this was equally true in time of peace, and that nothing but a preparation extending over a period of years would be of value, because an efficient army is the result of gradual development covering a long period of time.

PART III
THE CENTRAL POWERS AT WAR

CHAPTER XV

THE GERMAN ARMY

July, 1915.

THE German army of to-day really owes its beginning to the Prussian king, Frederick the Great. Frederick insisted upon absolute discipline in the Prussian army, insuring a performance of duty superior to the instinct of self-preservation; a great perfection in drill, giving great flexibility and manœuvring power on the battlefield; and a strict fire discipline, enabling his troops to deliver a rapid and accurate fire unequalled by his enemies. Frederick's system was an excellent one, not only from a military point of view but from an economic one as well. With a population of six million, he maintained an army of two hundred thousand, of whom forty thousand were cavalry, at an annual cost of $7,500,000. This same rigid system of economy has been continued to the present day, with the result that probably, more than any other nation, Germany gets value received for every mark spent on the army.

Between the time of the death of Frederick and the appearance of Napoleon, the Prussian army, while outwardly maintaining the high state of excellence of Frederick's day, really degenerated because it relied on outward forms rather than on

underlying principles. Consequently, the Prussians failed to keep up to date, and were badly beaten in 1806 by Napoleon at Jena and Auerstädt. One of the peace terms imposed by Napoleon was a limitation of the number of men Prussia could keep under arms at any one time. Scharnhorst evaded the purpose of this restriction by having men serve for a comparatively short time and then turned them back into civil life, in order to make way for others who were trained similarly. Thanks to this, Prussia had sufficient troops available to play a prominent part on the last battlefields of Napoleon. As she wished to be treated as an equal by the Great Powers, she had to maintain a military establishment beyond her means considering her comparatively limited territory, small population, and insignificant financial resources. But both the Prussian people and the Prussian king realized the necessity for this, if Prussia was to hold her own against her neighbors. They, therefore, adopted the system of universal military service put in force at that time and which, with minor modifications, has remained in force up to the present. The foundation of the system is simply that, with a few exceptions, every man when reaching a certain age spends a fixed length of time actively serving in the standing army. After this, he passes to civil life, but is available for military purposes first for a period of years as a reservist to bring the standing

army to its full strength in case of war, then as a member of the *landwehr*, and finally of the *landsturm*.

Prussia first showed the value of this system in 1866 when she decisively defeated Austria in less than six weeks of war. She convinced the world of its excellence when she quickly and disastrously defeated the French in the war of 1870–71. The prime result of this last war was to convince the other German states of the necessity not only of adopting the Prussian system but of building up with Prussia a national German army. Provisions for this were included in the Constitution of the German Empire, which became law in 1871. While the main principles for governing this army were laid down in the Constitution, the completion of the organization was further provided for in military conventions between Prussia and Bavaria, Prussia and Saxony, and Prussia and Wurtemberg. The Constitution, made available for military purposes every German male between the ages of seventeen and fifty. His active service, however, began with his twenty-first year and extended to the beginning of his twenty-eighth year. Three years of this time were to be spent actually with the colors, and then four in the active reserve, the reserve being used to bring the regular army to war strength. After this he passed into the *landwehr* where he remained for five years, and then into the *landsturm* where he

remained until no longer available for service. In peace time the Emperor was given almost supreme control, with the exception of the right of Bavaria to retain her own military organization and administration, the right of Saxony to have her own ministry of war, and several minor stipulations made by some of the other states. The Emperor, however, had the right to inspect all troops, thus insuring uniformity of training, organization, and equipment. In time of war the Emperor was supreme. This system still obtains, except that at present the service in the infantry and some other branches is for two years, which is followed by five and one-half years in the active reserve, five years in the first *ban* of the *landwehr*, six years in the second *ban*, and then service in the *landsturm*.

After the Franco-Prussian War, the strength of the army was approximately one per cent of the population of forty-one million in that the army numbered 410,000 men. Up to 1913 this proportion was retained, as at that time the peace strength of the army was 650,000 and the population numbered sixty-five million. The law of 1913 increased the peace strength to 870,000.

The peace organization of the German army when the war broke out was 669 battalions of infantry, 550 squadrons of cavalry, 633 batteries of field artillery, 55 battalions of garrison artillery,

44 battalions of engineers, 31 battalions of communication troops, and 26 battalions of train troops.

Since the beginning of the war the trained *landwehr* has been used for four purposes: at the commencement, to bring the active units up to war strength; for every active infantry regiment to make a reserve infantry regiment; as time goes on, to help in forming *landwehr* and depôt units, which are organized from time to time and sent to the front; and, to make good losses suffered by units at the front. A considerable part of the trained *landsturm* has been organized into battalions, which are named after the towns or districts from which they come. These battalions are used to guard railways, other lines of communication, prison camps, and, in fact, to do all the military work which must be done in the rear of the army. They are sometimes used at the front. All the men of the untrained *landsturm*, which included those who had no service in peace due to the large population, have had to report for examination as to fitness for military service. So far only those up to the age of thirty-seven have been taken. They are sent to the depôts, where they receive a very vigorous training at the hands of trained officers and noncommissioned officers. They are used as needed to make good losses at the front, and with the *landwehr* to make up the new units organized from time to time.

At the outbreak of the war, large numbers of young men not old enough to be called, and others not called immediately, volunteered for service. Up to the present, more than 2,000,000 of them have been accepted. These men are sent to the depôts for military training and are used in the same manner as the untrained *landsturm*. The heavy marching and fighting is always done, no matter where it may occur, by veteran units made up of the most active, determined men.

When the war started, Germany had in the regular service ample officers for the active army and for higher grades of the new units, which she since has created. In addition, she had a large number of reserve officers, and a considerable number of regular officers on the retired list but subject to service any time the government might see fit. Throughout the country there also were many wholly retired regular officers, all of whom promptly returned to the service. Since the war has been going on, Germany has trained and is training large numbers of subordinate officers at different places throughout the country. These are, for the most part, men who have done service in peace time or were doing it when the war broke out. Without any exception they are men who already not only have served at the front and therefore have had considerable military experience, but who have distinguished themselves in battle.

H. J. R.

GERMAN FIELD ARTILLERY CHANGING POSITION IN FRONT OF BREST LITOVSK

H. J. R.

TYPICAL GERMAN INFANTRY RESERVISTS

All the troops used so far consist of men absolutely physically fit; that is, without the slightest physical defect. Besides, a large number of men, who have some slight physical defect which might interfere with their ability to undertake long, hard marches but who otherwise are in good condition, have been taken and organized into special units. These special units are used in the construction of trenches and field fortifications of all kinds, but not for fighting.

The first thing which strikes foreigners entering Germany, particularly after leaving France, is the large number of men seen everywhere. The railway stations and trains are crowded with men in uniform. The streets of the cities are full of men in uniform. While most of the latter are men undergoing training, many are at home on a short furlough. Besides the large number of uniformed men, many civilians always are in evidence. A few of the latter are older men who have done a certain amount of service since the war commenced, and who then were permitted to return to civil life; others are young men who are considered to be of more value to the state engaged in other work than that of fighting; while still others are men within the limit of military service but not yet called. At frequent intervals, detachments of men bound for the front may be seen. Though these consist of men who have not yet fought, they are not made

up of boys and old men. Every article of their equipment and their clothing is brand new. Daily in the streets of Berlin and along the railway, when one is traveling, long columns of new wagons and other military equipments always new, may be seen. In Germany to-day there is every sign that the point is far from being reached when the military authorities will suffer either from the lack of men or material.

The German system makes the people the army, and the army the people. It has been copied in its underlying principles by every nation of any consequence, with the exception of Great Britain and the United States. In the Orient, Japan has adopted it. In Latin America most of the countries have it on paper; but Argentine, Chile, Peru, and Bolivia rigidly enforce it, with the consequence that they have excellent armies. This means that the world has accepted the fact that all citizens or subjects of a country not only must serve in time of war but must be trained in time of peace so that their service in war will be of some value. Only Great Britain and the United States cling to the obsolete idea of a small professional army distinct from the people as the one and only means of defense. The regular armies of these two nations are needed to garrison overseas possessions, to furnish the backbone of the first line, and to afford the instructors for training the

citizens of these countries; but such armies as the British and American regulars cannot furnish the numbers needed to resist successfully the attack of a whole nation in arms. In warfare between modern powers, nothing but a whole nation trained to arms can do that.

CHAPTER XVI

THE GERMAN ARMY IN THE WAR

July, 1915.

AMONG Americans the prevalent idea of the German army is that it obtains its successes because of a rigid, machine-like organization which deprives the individual officer and man of all initiative and in no way considers him as an individual. This idea is a mistaken one. The only thing rigid about the German army is the insistence that neither officer nor soldier, no matter what his excuse, shall be permitted to fail to do his duty toward his country, either in time of peace or war. Initiative among the officers is encouraged to a much greater extent than is the case in our regular army or that of Great Britain. Certain standards of excellence are set for every unit, from the company up. The commanders of these units are allowed great liberty in the methods adopted to bring their commands to the required standard. The yearly inspections and manœuvres determine whether or not these standards have been reached, and the future of the officer in command of each unit largely depends upon the showing made by his command at these inspections and manœuvres; those who show the greatest ability are the ones who go ahead the fastest. The men who are good

practical soldiers must show themselves to be students, and the students also must show themselves to be good practical soldiers; in other words, theory alone or practice alone will not advance an officer—he must be a good officer both theoretically and practically. Officers are encouraged to discuss thoroughly, both in speech and in writing, all tactics, regulations, and other matters having to do with the handling, organizing, arming, and equipping of troops both in peace and in war time. The efficiency of the officers helps keep the morale both of the enlisted men and the civilian at home on a high plane because all know when a German soldier lays down his life he has not wasted it in some futile attempt due to a lack of training or to the ignorance of his officers.

The high standard required is shown by the regulations of the German army. As the officers thoroughly understand the underlying principles which govern everything, and have been practiced in quickly deciding what to do in each case, the regulations only lay down broad general principles, leaving the minor details to be worked out in each instance by the officer. Our regulations and those of the British are given too much to laying everything down to the last detail and with considerable rigidity. While this is probably not needed for our regular officers, because they are sufficiently well educated from a military point of view, it is

necessary for our National Guard officers and for the more or less green officers who would come into the service at any time we may raise volunteer forces. Even with our regular officers, this is more necessary than it is in Germany, because we seldom have manœuvres, and when we do, the small size of our regular army prevents the assemblage of sufficient number of troops to give the essential practice.

The Germans have made a scientific study of war in that they have tried to get at the truth regardless of national pride or prejudice. This is well illustrated, among other things, in their frank recognition of the fact that during battle there are many skulkers, and that the only way to overcome this straggling on the battlefield is to have battle police who promptly arrest and send back to the firing line those men who have allowed fear to overcome their sense of duty. The British at first were inclined to take this as a proof of lack of fighting stamina on the part of the Germans. Later, finding the same necessity, they, too, organized the battle police. The Germans, however, had learned the necessity from a frank study of their previous wars and were prepared from the first.

At the beginning of the war, much was heard from British sources about the Germans using obsolete infantry tactics, in that they attacked

in what was erroneously called mass formation. As a matter of fact, the attacks were made by successive lines, each one in single rank with little or no interval between men in the same rank, or some similar formation. The British started the war believing in a firing line made up of individuals with considerable intervals between them. Since, they practically have adopted the German method. The reason for this difference of opinion at the beginning of the war was that the Germans, having carefully studied the conditions under which modern infantry must fight, soon saw that a single firing line with wide intervals between men did not have sufficient fire-power because of the comparatively small number of rifles occupying any given front. The best answer to fire is more fire. Therefore, the strongest firing line is the one containing the greatest number of rifles which actually can be used at the same time. It is true that such a line offers a better target than a line with a few men on it, but the fire from it is so much greater that the few men occupying the other line are overwhelmed by this fire and cannot take advantage of the better target. The only object in making an attack is to overcome the enemy. To do this, two things are essential: a firing line with sufficient fire-power to keep down the fire of the enemy; and sufficient men in lines back of the firing line to make good losses and to

insure the attack arriving at the enemy's position with enough men left alive and unwounded to drive him out. The first of these is accomplished by the heavy firing line; the second, by successive lines back of the firing line. The Germans in reasoning this out, kept before them, as the object to be attained, the overthrowing of the enemy. While they knew that such tactics would necessitate loss, they considered this loss of secondary importance in comparison with the defeating of the enemy.

Due to the complaints of the British public during the Boer War and the constant demand that battles be fought without losses, the British army tried to adopt tactics primarily founded on the desire to avoid losses. They, therefore, adopted very open extended order. As a consequence, while their attacks did not offer good targets to the enemy, they were so weak in fire-power they could not get anywhere. For this reason the Boer War was full of incidents in which British firing lines were stopped at five and six hundred yards; in other words, their attempt to give the Boer a poor target resulted in such excessive extension and lack of support that they could not hold down the Boer fire and thus advance themselves. Successful attacks cannot be made without loss. Napoleon's dictum that one cannot make an omelet without breaking eggs holds just as good to-day

as it did in his time. Then, too, an action brought to a quick close, even though the losses be reasonably heavy, is more saving of life in the end than one dragged out over a considerable period of time with comparatively small losses every day throughout this period.

The German army is taught to take the offensive. The objective picked out is always the enemy's field army and never a locality; this, for the reason that once the field army is destroyed, all localities and towns fall an easy prey to the invader. On the other hand, if a locality or town is seized and the enemy's field army is still in existence and has liberty of action, the invader is in a difficult situation, because he must try to hold what he has taken and at the same time defeat this army. In general, it may be said that the underlying German principles are to take the offensive first; to strike from the beginning with the greatest violence possible; and to keep it up until the enemy is defeated. This is done by occupying a wide front from the first, thus bringing the maximum force to bear from the beginning and threatening the enemy's flanks at the same time.

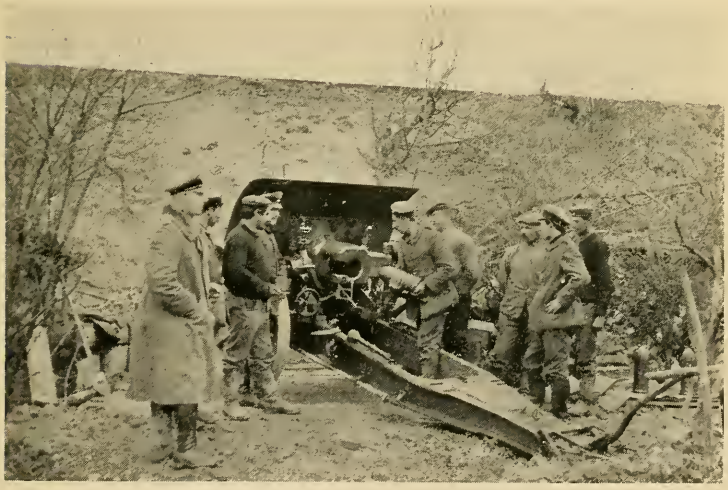
The military problem faced by Germany at the beginning of the war was a difficult one. She had a powerful enemy not only in front of her but behind her. True, she occupies a central position, and due to the excellent organization of her army

and her railways, she can move more rapidly in any direction than can any of her enemies. A strategical situation, in which one force occupies a central position, from which it can move rapidly as a whole against any one of the several parts into which the enemy is divided and thus overwhelm them one after another before they can concentrate, is considered an excellent one. This is only true, however, when there is no great discrepancy between the total strength of the two forces concerned, and also when the force which is split into several parts is practically entirely to the front of the concentrated force and not both in front and in back of it, as has been the case with Germany's enemies since the beginning of the war. Nevertheless, the only chance for Germany in her difficult situation has been the application of this same principle of holding all but one enemy as best she can, while concentrating everything on that one in an attempt to defeat him decisively.

Russia needed more time to mobilize than France; also, Russia could make no general direct advance into the heart of Germany until the pressure which the Austrians would bring on the southern flank of any such advance had been disposed of. Therefore, the Germans decided to attack France first, crushing it, if possible, and thus be free to give their undivided attention to the defeating of Russia. The battle of the Marne prevented the

H. J. R

GERMAN INFANTRY TAKING POSSESSION OF BURNING CITADEL OF BREST LITOVSK



E. F. W.

A GERMAN 15-CM. HOWITZER

crushing of France and left it still in the field as an active enemy to be dealt with. This was followed by the French and British attempt to turn the German right flank and to join with the Belgians in Antwerp. Had they succeeded, the Germans would have been driven out of France, and perhaps Belgium, or at best would have found their position much more difficult to maintain. The Germans everywhere stopped the flanking movement, captured Antwerp, and put the Allies on the defensive in northern France and southwestern Belgium. Thus they recovered the initiative lost by the battle of the Marne. They probably would have broken the Allied line had they been able to continue their attacks. However, in the meanwhile, the Russians, by steadily defeating and pushing back the Austrians toward the Carpathians, had reached a position where they could advance from western Poland directly into Germany. Therefore, just at the time when Germany most needed freedom of action in the west in order to dispose effectually of her enemies there, the Russian successes compelled her to transfer her chief effort from the western to the eastern theatre of war.

This was the French and British opportunity. Had they been able to assume immediately a vigorous general offensive, the situation for Germany might have become very critical. As they were not able to do so, Germany had a free hand

to move against the Russians, which she did most vigorously, driving them back to a position just in front of Warsaw. The French and British virtually announced that they needed the winter to prepare for the general offensive which undoubtedly would come with the spring. This meant that if Germany could defeat Russia decisively before spring, she would be free to turn her full strength to the west to meet the French and British. If Russia could not be disposed of by spring, and the French and British made their general offensive, then again Germany's position might become very critical.

When early spring came, not only were the Russians not decisively defeated in Poland, but they were still advancing in Galicia. The British attempted a general offensive at Neuve Chapelle, with the purpose of breaking through the German lines, thus, of course, compelling considerable sections of that line to the right and left of the hole made to fall back. While some ground was gained, the hole was not punched through the German line, so that the offensive was a failure.

Later the French started an offensive to the north of Arras, which at first was successful in that considerable ground was gained. However, this offensive also failed to break an opening through the German line and thus render the German position untenable.

Italy was persuaded to come into the war so that Germany and Austria had a new enemy to face. Her entry has not materially affected the situation, because up to the present she has been unable to make any gain of importance against the troops left on the defensive by the Austro-Hungarians. Had the attempted British offensive, the French offensive to the north of Arras, and the entry of Italy necessitated the withdrawal of a considerable number of troops from the Russian front, something would have been accomplished from the Allies' view point, though the effect would have been small in comparison with a vigorous general offensive, which so far has failed to materialize. Such local successes as have been had are of comparatively little value, as they leave just as many lines of German trench to be overcome as before they took place. Thus Germany has been free to concentrate on and vigorously attack Russia. Existing military conditions, therefore, show that Germany is not only not on the defensive but is on the offensive with the choice of initiative, and decisively defeating one of her strongest enemies.

While the Allies attempt no real general offensive, but wait for their great economic preponderance to overcome Germany, there is strong indication at this time that Germany's active, aggressive armies are overcoming her enemies. Wars are

won on battlefields, not in the counting houses or workshops. Economic resources are necessary, to be sure, but are secondary to military strength and determination. Once war is declared, a well-armed enemy can be beaten only by plain, downright, hard, determined fighting. There never has been nor ever will be an Alladin's lamp or philosopher's stone which will win a war.

CHAPTER XVII

THE AUSTRO-HUNGARIAN ARMY AS A FACTOR IN THE PRESENT WAR

September, 1915.

FROM the beginning of the war the Austro-Hungarian army has had a difficult rôle to play. Until approximately the middle of November, 1914, when the Germans changed from the offensive to the defensive in the western theatre of war and transferred the bulk of their troops to the eastern, or Russian, front, the Austro-Hungarians had to bear the brunt of the attacks of the greater part of the Russian army.

True, the Russians attempted to conquer East Prussia, but these attempts were not made by the bulk of the Russian army and were absolutely subordinate to the movements going on in southern Poland and Galicia. Grand Duke Nicholas mobilized the greater part of his army along the western border of Russia proper — that is, just east of the Bug River and the Galician border — for the reason that before any advance through central Poland into Germany could be attempted, the Austro-Hungarians, whose possession of Galicia put them on the southern flank of such an advance, had to be pushed back or decisively beaten.

As long as the Austro-Hungarians could hold back such an advance, the Germans were safe

from any serious Russian invasion except in East Prussia. The German campaign in France and the Austro-Hungarian attack on Serbia, therefore, depended largely on the success the Russians would have in this eastern theatre of war.

While the Austro-Hungarians started with a slight success in southern Poland, the weight of the Russian numbers and their superior leadership told in the end, with the result that the Austro-Hungarians were driven back, losing large numbers of prisoners and guns. Matters finally became so bad that the Germans were compelled to abandon their offensive in the west and to transfer all available troops to the Russian theatre of war.

While this materially bettered conditions, the Russians almost invariably replied to German attacks by an attack on the Austro-Hungarians. In general, it may be said that while the Germans gained ground in Poland, the Russians gained in Galicia; also, during the winter the Austro-Hungarians were defeated and driven out of Serbia.

By the end of spring, the Russians were seriously threatening Hungary, and the indications were that Italy was about to attack with the army she had been bringing carefully up to date since the commencement of the war. Thus, just at the time when the Russian pressure was being most felt, the necessity arose not only of keeping along the

Italian border the troops and artillery stationed there in case of an emergency, but of strengthening them.

This period was the most critical of the war for Austria-Hungary. However, early in May, the Germans and Austro-Hungarians began their attack on the Russians along the Dunajec River in western Galicia, which broke through the Russian line and was the beginning of the series of successes resulting in the occupancy by these forces of all of Poland and the reoccupancy of the greater part of Galicia. This advance, coupled with Italy's failure to penetrate any part of the Austro-Hungarian line, effected great improvement in the Austro-Hungarian morale.

Like the majority of European troops, the individual officers and men of the Austro-Hungarian army are brave; in fact, the impatient bravery of many of the higher officers has contributed largely to many of their defeats. In the beginning of the war, cavalry leaders especially made continual headlong attacks on the Russians without sufficient reconnaissance wherever they met them, resulting, again and again, in severe cutting up of considerable bodies of cavalry by superior Russian forces.

The unwillingness of the general in command of the expedition into Serbia to wait until arrangements could be completed for continuing the advance, despite the protestations of all his staff, was

a large factor in his defeat. During the advance into southern Poland the latter part of June, Archduke Joseph Ferdinand refused to wait for von Mackensen on his right, but pushed ahead alone, with the consequence that the Russians concentrated on him at Krasnik, repulsed him, and took 15,000 prisoners.

The Austro-Hungarian army also has suffered from the fact that with the exception of their artillery, the peace-time training, particularly of the higher officers, is neither as rigid nor as thorough as that which obtains in Germany and France. However, since the beginning of the war, many general officers have been retired or put on duty in the interior of the country. This, coupled with the promotion to higher grades of younger men who have demonstrated by actual service in the field their fitness to command, has raised the standard of the troops. The training and leadership of troops not only are bettered under such circumstances but also their morale, due to the increased confidence which superior training and leadership invariably bring.

With the possible exception of the Czechs here and there, the troops, in spite of racial jealousies and many differences of language, have proved loyal to the empire. Two battalions of the twenty-eighth infantry, made up of Czechs, bolted from their trenches in an attempt to reach the Russian

H. J. R.

AUSTRIAN INFANTRY ON THE MARCH IN POLAND

H. J. R.

AUSTRO-HUNGARIAN FIELD PIECE READY TO FIRE IN FRONT OF IVANGOROD

trench opposite, and surrender. While many got there, more were shot by the German and Austro-Hungarian troops on their right and left.

The twenty-eighth infantry, as a consequence, was stricken from the army list in disgrace. Since this episode such Czechs as are in the army have been distributed among other races. Their disloyalty has generated a strong feeling against them throughout Austria-Hungary, especially in the army.

Due to heavy losses, particularly in prisoners, during the early part of the war, Austria-Hungary called the older reservists to the colors more promptly than most of the other nations engaged. Therefore, when the tide turned and the losses became much less, the barracks throughout the country soon were overcrowded with men undergoing training. New battalions then were organized and sent to join the various regiments at the front. Because of this, many of the infantry regiments now have seven and eight battalions of a thousand men each, instead of four, the prescribed number.

Contact with the Germans and the mixing of units of the two armies in the same group have had considerable influence on the Austro-Hungarian army. This intermingling of German and Austro-Hungarian troops only takes place on a large scale. Generally, the units serving together

are divisions, army corps, or armies; for instance, the army operating in front of Ivangorod was made up of the Twelfth Austro-Hungarian Army Corps under the Hungarian general, von Kövös, and three German divisions; von Mackensen's group of armies when moving north from southern Poland consisted of an Austro-Hungarian army and a German army. To its left was an Austro-Hungarian army under command of the Archduke Joseph Ferdinand. General Count von Conrad, the Austro-Hungarian chief-of-staff, retained complete control of all Austro-Hungarian troops. In joint movements the Germans invariably consulted him. If the German general staff determined the movements to be undertaken by both armies, as seems to have been the case, they were always very careful to deal directly with von Conrad. The consequence was that orders for the Austro-Hungarian troops came through the regular channels just as if the Germans had nothing to do with them. Every effort apparently was being made both by the German and Austro-Hungarian high command to prevent jealousy or discord from interfering in any way with the demands of the situation from a purely military point of view.

Undoubtedly the Austro-Hungarian officers are somewhat jealous of the Germans, but the feeling is carefully repressed by their own superiors. On the other hand, there is an evident desire among

all Austro-Hungarians to emulate the Germans and support them in every way, due to a number of reasons: the Austro-Hungarians wish to make up to the Germans for their failure to lend them vigorous support during the Morocco crisis; they wish to show the Germans that they, too, are capable of accomplishments on the battlefield; they wish to be considered efficient by the Germans, for the Hungarians, in particular, admire the Germans and their methods.

The Kaiser and his generals give the fullest measure of credit to the Austro-Hungarians for any successes they may have achieved and see that those who distinguish themselves receive appropriate decorations. A stranger visiting these armies in the field finds every evidence there of complete harmony.

CHAPTER XVIII

COMMUNICATIONS OF AUSTRO-HUNGARIAN-GERMAN ARMIES IN RUSSIAN POLAND

September, 1915.

THE German and Austro-Hungarian advance into Poland and Russia has occasioned much discussion as to the possibilities of supplying such large bodies of troops such a distance from their base. The question became a particularly vital one when the Russians destroyed the railway lines and later removed or destroyed everything which might furnish food, material, or shelter to the invader.

While the number of railroads in Courland and Poland are few compared with those in Germany, the map shows a number of main lines running generally in a southwesterly and northeasterly direction. When war was declared there were six main lines from Germany and Austria-Hungary proper to the position now occupied by the battle line through Courland, Lithuania, and Galicia.

The Austro-Hungarians, by building a comparatively short stretch of railroad from Rzeszów, near Tarnow, in Galicia, to Lublin, in Poland, opened a seventh through line. These lines being roughly parallel and running to different parts of the central empires, give, when in order, excellent facilities for the supply of the various armies.

As the Russians retired, they did the best they could to demolish most of these roads. They destroyed all the bridges and most of the culverts, smashed most of the semaphores and in many places the switches also, and blasted apart the ends of the rails. Almost invariably they wrecked the water towers and burned the stations; they sawed off or chopped down the telegraph poles and cut the wires. However, the roadbed and ties were practically undamaged.

As the armies of the Central Powers advanced, their railway and pioneer battalions followed, and rebuilt the roads.[1] Labor was plentiful, as there were thousands of Russian prisoners who could be used and in many places hundreds of peasants eager to earn a little money. The rails were promptly replaced, as were the switches and semaphores. New water towers, consisting of steel tanks mounted on piling, were promptly erected. All but the largest bridges and all the culverts were replaced by trestle work without much delay, as everywhere in the country traversed there are large forests. Work of replacing the big bridges was commenced immediately. Here piling was put in to support timber trestles, which, in turn, support steel girders.

This railway reconstruction work showed evidence

[1] The German army has battalions specially trained to reconstruct and handle railways, called *Eisenbahn* battalions. They have proved of the greatest use during the war.

of careful preparation beforehand, as all kinds of necessary material was constantly arriving from Germany and Austria-Hungary. The telegraph troops soon had the telegraph lines repaired. In many cases the sawed-off poles simply were fastened to their stumps, showing that thorough destruction of a line necessitates burning the poles.

The result was that, except where a line crossed a river, such as the Vistula or the Bug, operation was soon resumed. At such crossings transshipment had to be made by wagon. Wagon bridges were completed in from five to six days.

The main east-and-west wagon roads in Poland are excellent macadam roads; the remaining are similar to the typical American road—dusty in summer and quite muddy in the spring and fall. When the weather is dry, as is frequently the case for considerable periods, troops, light artillery, and wagons can move across country. In many cases at points where the Russians had destroyed road bridges, this was done to save even the time necessary to build a pontoon bridge. While the armies apparently were plentifully supplied with pontoons, little time was lost in replacing bridges built of them by more permanent timber trestle ones.

To supplement the railroads, the Germans have numerous motor-trucks, each of which pulls a trailer practically of the same size as the truck.

H. J. R.

RAILWAY BRIDGE OVER THE VISTULA AT IVANGOROD AS THE RUSSIANS LEFT IT

H. J. R.

GERMAN RESERVISTS ON THEIR WAY TO THE FRONT IN POLAND

They are kept supplied with all needed articles and repairs by traveling railway motor-depôts, consisting of a train of tank and freight cars. As the army advances they move forward also. The Austro-Hungarians have comparatively few motor-trucks.

Both the Germans and Austro-Hungarians have immense numbers of horse wagons. The German wagons, which are larger and more solid, are drawn by powerful horses. The Austro-Hungarian wagons, of the type used by the Galician peasants, are very light but quite strong, and are drawn by two Galician horses, virtually ponies. On reasonably good roads the German wagon gives best service, but the Galician wagon is superior for very muddy roads and cross-country travel, as it does not upset nor break so easily and can be lifted out of a hole more readily.

The German trains each have fifty wagons; the Austro-Hungarian trains, one hundred. As is the case with everything German, their wagon trains are in perfect order, and all the men are in uniform. The Austro-Hungarian trains are very picturesque, as the drivers wear civilian clothing, frequently the Hungarian peasant costume; they are very much addicted to red trousers. The members of one of these trains generally come from the same village and are under the immediate charge of one of their headmen. These trains are met every-

where, going and coming along the roads, or drawn up in some field, the wagons in long parallel rows and the horses turned loose in a herd to graze.

Evidence is apparent everywhere that the army is amply supplied with food, ammunition, and all the many other requisites necessary to keep a modern army going. The Central Powers expected a much more stubborn resistance at Brest Litovsk. Consequently, when the place fell, there were huge piles of ammunition at the various crossroads back of the original line occupied by the attackers. When the troops moved on in pursuit of the Russians, ample ammunition was brought up by the trains and left in large piles for some time before being picked up and taken to the front. The more one examines the communications of the armies of the Central Powers operating in Russia, the more evident it becomes that Germany and Austria are not suffering in any way from lack of material or inability to get supplies to the troops at the front.

CHAPTER XIX

THE RUSSIANS AS SEEN FROM THE AUSTRO-HUNGARIAN SIDE

September, 1915.

THE Russian prisoner of war is one of the most familiar sights in Austria-Hungary, including even the Austrian Tyrol. At many of the stations groups of Russian prisoners with a few *landsturm* guards are seen either waiting for a train or getting on or off one, while interested crowds of civilians stand about.

Frequently these prisoners are used in numerous capacities to do the work of the men who have been mobilized. Wherever railway construction is going on, and there seems to be a great deal of it in various parts of the empire, large groups of Russian prisoners are to be found working leisurely under comparatively few guards.

From the train windows here and there the traveler catches glimpses of prison camps, practically always of the same type—long rows of wooden huts surrounded by several rows of high barbed wire fences, with *landsturm* sentinels pacing up and down outside, while groups of big men in Russian uniforms lounge about in the sunniest spots of the enclosure.

The Russian prisoners are also utilized in large numbers in Poland to help rebuild the railways,

principally for that part of the work done by the unskilled labor. This work proceeds at a good many points at the same time. On the big bridges, working together may be seen large parties of men — Germans, Austro-Hungarians, Russians, each in the uniform of his army.

In captured fortresses, such as Ivangorod and Brest Litovsk, an immense amount of work had to be done to straighten out the disorder occasioned by the partially successful attempts of the Russians to destroy them. In one place, artillery ammunition is scattered about, either where the Russians left it or where the first German or Austro-Hungarian troops dragged it out to save it from being burned, as both of these fortresses were on fire when captured. In another place, infantry ammunition is scattered about, or various other supplies cover the ground. For all this cleaning up work large numbers of Russian prisoners are used.

A captured field position or a battlefield always is littered with rifles of both armies, captured guns of all kinds, as well as varieties of all the articles that go to make up the equipment of an army. These are carefully collected, sorted, and shipped to the different arsenals and factories, to be put in good order for use again if necessary. Most of this work is done by Russian prisoners. The ups and downs of fortune certainly are illus-

trated by a group of prisoners, under guard of their enemy, piling up and preparing for shipment the rifles they used but a short time previous in battle against that same enemy.

Both the German and Austro-Hungarian armies have what are called *landsturm* working battalions made up of men of military age who have some slight physical defect, which does not interfere with their doing ordinary work but which would impair their efficiency as soldiers. These battalions are used for such work as the building of roads in rear of the army.

Generally where they are at work Russian prisoners also are seen. The prisoners, when asked the work they were permitted to do by their regulations, replied that Nicholai Nicholaievitch had told them that, if captured, they could work on anything but trenches or fortifications.

With few exceptions, a distinguishing feature was the size of the prisoners. They were mostly a fine looking lot of men, well clothed in good serviceable uniforms. They seemed to take life pretty much as they found it and were not worrying. In most cases they appeared to be on the best of terms with their captors. The Austro-Hungarians say they are extremely good natured, but very indolent.

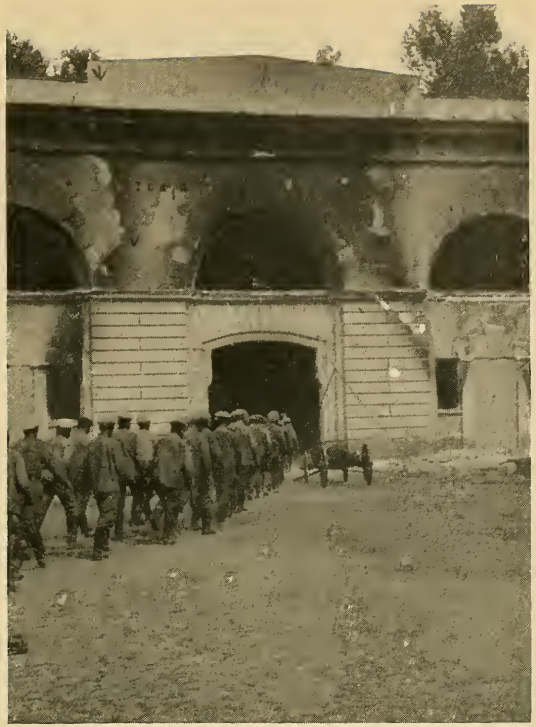
In going to the front by rail, one of the familiar

sights is "Ivan," as the Austro-Hungarians call the Russian soldier, being brought to the rear in the same box cars which just had taken fresh troops to the front.

As the battle line is approached, groups of recently-captured men are met on the road, being taken to the rear. As is always the case with men just taken prisoners, they are weary and dirty.

When Brest Litovsk was captured, the prisoners, of whom there were only about eight hundred, were concentrated in the large inner court of the citadel. In the center of this court is a small park full of trees, and everywhere under these trees were the Russians, mostly asleep, for after an action, men are always worn out. Guarding them stood Germans and Austro-Hungarian sentinels, still in heavy marching order, while outside and around all were the tall brick inner walls of the citadel, with smoke pouring out of the windows of the barracks as it burned.

One of the older prisoners, a good looking, intelligent man, on being questioned, said that this was his third war, as he had fought through the Boxer campaign in China in 1900 and the Russo-Japanese war of 1904. Until May he was very confident that the Russians were going to win, but since he had become discouraged, as it was too much like the Russo-Japanese war —a fight followed by a retreat, and then a fight and



H. J. R.

RUSSIAN PRISONERS LEAVING THE CITADEL OF BREST LITOVSK

H. J. R

RUSSIAN SOLDIERS CAPTURED AT IVANGOROD

another retreat, and so on. He closed the interview by asking if it were true that the prisoners were to be shot by the Germans, as the Russian officers had told them.

The opinion of the soldiers of an army of their enemy is always interesting. Invariably soldiers have a higher opinion of their enemy than have the inhabitants of an invaded country. The Austro-Hungarian soldiers and officers always speak well of the Russians, except the cossacks, who, they say, are not much account at fighting but excel in destroying property. The other troops they believe to be brave and persistent fighters. They think the officers good material but do not consider that they are sufficiently well educated professionally. They believe that there is a recent shortage of officers, as the number captured is invariably below the proportion to the number of men; for instance, at Brest Litovsk, of the eight hundred Russians captured, there was only one officer. They also maintain that recently the Russians have commissioned many of their non-commissioned officers, as a considerable proportion of the officers captured can hardly read and write.

In referring to the large number captured, the Austro-Hungarians say that the rumors that many of the Russian soldiers hold up their hands without proper resistance was unfounded. They claim that frequently they made large captures, due to

the fact that all the officers were either killed or wounded, and the men, lacking initiative, did not know what to do, and consequently were cut off before they could make up their minds.

Many of the Austro-Hungarian officers have served both on the Russian and Italian fronts. They make a very interesting comparison between Russian and Italian attacks. The Italians, they say, come on with great enthusiasm and speed, but if the attack is not immediately successful, they retire. On the other hand, the Russian attack is not nearly as impressive to watch approach, as it is much slower, but it is much harder to resist because always persisted in.

The inhabitants left in the various villages, which virtually were all destroyed by the Russians as they retreated, generally reported that the Russians were somewhat lacking in officers as well as artillery ammunition; that many of the soldiers were discouraged and deliberately remained behind during a retreat so as to be captured.

CHAPTER XX

WHAT INVASION HAS MEANT TO THE POLES

September, 1915.

THE Poles, because of their inability to protect themselves from their surrounding enemies, first lost the outlying portions of their kingdom, formerly one of the largest in Europe, and then had the remnant of their country divided among Russia, Austria, and Prussia. Due to this, the present war found the Poles in the armies of three different nations and, what was infinitely worse, fighting against one another. Then, too, because of the strategical position of Poland, the country promptly became one of the main theatres of war and remained so for a year. Thus the Poles have had to fight on both sides in a war from which it is to be doubted if they can gain much benefit, no matter which side wins, while their women and children have had to suffer all the hardships which inevitably come to the inhabitants of an invaded country, as the combatants have fought intermittently backward and forward across the country.

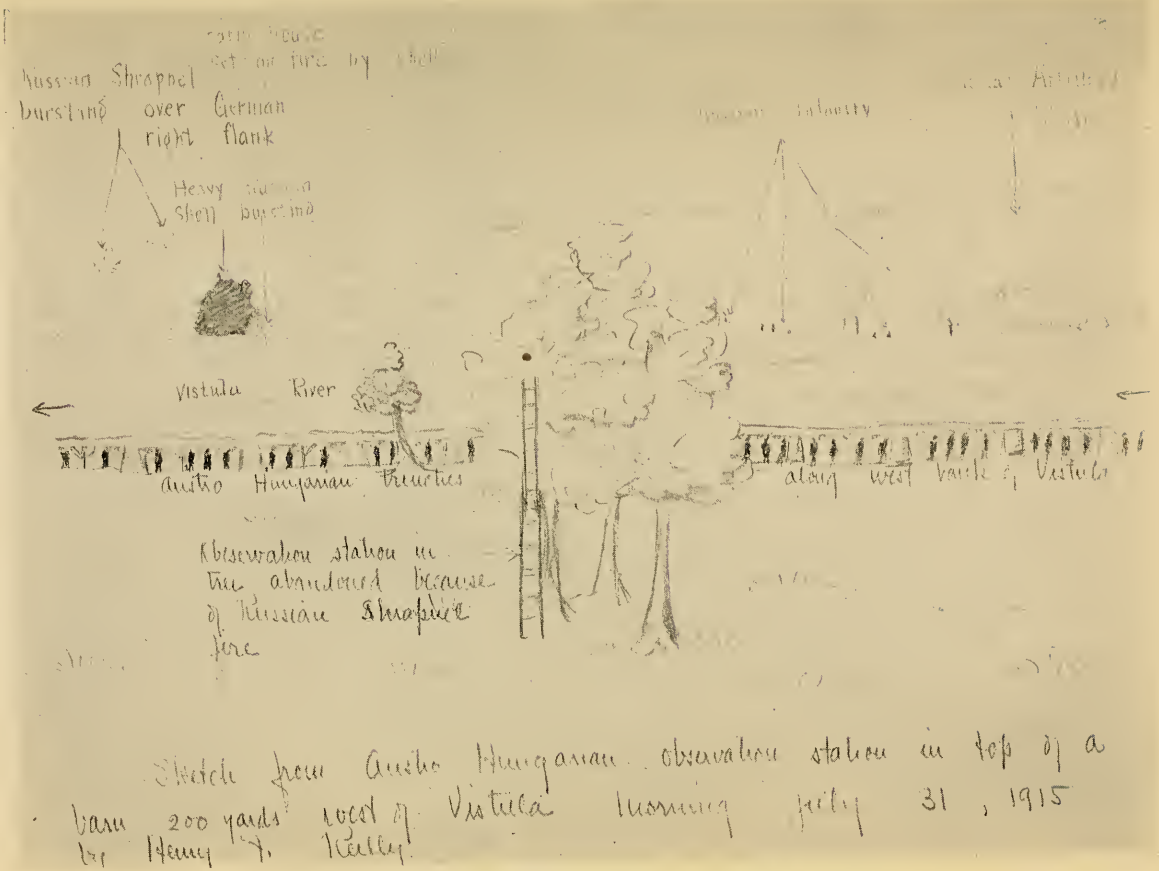
In all wars considerable private property has been destroyed, much of it necessarily but some wantonly. Probably in no war has the destruction been so great as in the present one. This is

primarily because of the great length of modern battlefields, due to the number of men engaged and their great depth, due to the long range of modern field artillery. Aeroplanes and airships, too, have caused damage in localities out of reach of the guns, although this has been comparatively slight.

In crossing southern Poland, from the west to the Vistula, practically no private property was destroyed other than that incident to fighting. Large towns, such as Kieltse and Radom are untouched except in such particulars as the removal by the Russians of all copper from the brewery in Radom. Incidentally, within a week of the German-Austro-Hungarian entry, they had the brewery in operation supplying beer to the troops along the Vistula fifty kilometers away.

The fighting along the Vistula was responsible for the destruction of a great deal of private property, as the villages here are more numerous than in the country farther to the west. Most Polish houses, being built of timber and having thatched roofs, catch fire readily, and as they are generally quite close together a few shells dropped into a village almost invariably means complete destruction by fire.

Masonry buildings, such as those found along the French front, while of little value from the point of view of protection from artillery fire, can



FIELD SKETCH OF THE FIGHTING ALONG THE VISTULA

By Henry J. Reilly

rarely be set on fire; they must be knocked down, which takes a large number of shells.

On the Russian front, after a fight commences villages burst into flame and send columns of black smoke high into the heavens. At night the spectacle is impressive, as the flames of the burning villages, the flashes from guns and bursting projectiles, the glowing tracers of the artillery shells, and the star bombs with their trail of light ending in an intense white glare, pierce the darkness in every direction.

When the Russians found they could not hold the line of the Vistula and would have to retreat toward the Bug, they decided to destroy all private property which might be of any assistance to the invader. Nova Alexandria was the first place of any size to be burned. From the Austro-Hungarian positions along the edge of the forest on the west bank of the Vistula, cossacks could be seen going from house to house setting them on fire. In a few hours a dense column of smoke and flame, visible for miles, marked the position of Nova Alexandria.

As Ivangorod is a fortress pure and simple and not built around a town, no private property was destroyed.

From the Vistula to the Bug, a distance approximately of eighty miles, the Russians burned the greater part of the villages. Here and there

individual houses escaped, and some of the smaller towns entirely, due to the fact that the places concerned were considerably off the route of the retreating troops. In other instances the Germans and Austro-Hungarians pushed the Russian rear guards so hard they had no time to apply the torch.

The one reasonably durable feature of the average Polish farm or village house is its large, tall brick chimney. The track of the Russian retreat is marked by these chimneys discolored by flame and smoke and surrounded by ashes. Sometimes they are found singly, sometimes in groups, but more often in long, irregular lines on either side of the road marking what once was a village street.

The inhabitants who are left invariably report that the burning was done not by the regular troops but by cossacks, who, they say, carry inflammable gasoline torches. That many of the best houses of a small town are frequently left undamaged is explained by the fact that their owners succeeded in bribing the cossacks not to fire them.

The Jews, of whom there is considerable number in all the towns, claim that the cossacks deem it great fun to burn them out. Brest Litovsk, a town of about 65,000 inhabitants, with the possible exception of twenty of the best houses, was completely burned by the Russians before they evacuated the neighboring fortress of the same name.

A few days previous they had compelled all the people to leave for other towns farther east in Russia. When the Germans and Austro-Hungarians entered, the only living things found in the smoking ruins were hundreds of cats and a stray dog or two.

General Kövös, the Hungarian in command of the Twelfth Army Corps, when questioned as to the effect such destruction might have on the campaign, replied that under modern conditions none, other than inconvenience to the invader. The reasons he gave were that as far as food was concerned, modern rail transportation facilities were so excellent it made no difference, as supplies from any part either of the German or Austro-Hungarian empire could be, and were being, brought to the front in a comparatively short time. Even were most of the food supplies not removed, it would be necessary to bring most of the subsistence of the army from the central empires when operating with such large masses of troops in a country as sparsely settled as Poland. As to shelter for the troops during the winter, it also made little difference, as even during the preceding winter, when operating in a country where, for the most part, the villages and towns had not been destroyed, they were so few and far between as to be of little use for this purpose.

The destruction wrought by the Russians, there-

fore, would not entail on the great majority of the men and officers any greater hardships than they had endured the preceding winter.

The relations of the Poles with the German and Austro-Hungarian invaders were based on two facts: the first, and by far more important, was that with few exceptions the civilians did not indulge in such practices as cutting telegraph lines or firing on soldiers from housetops and out of windows; hence the invader seldom had to resort to the punishments prescribed in the military law for war treason. The second fact was that while many Poles probably hope for self-government and, therefore, are not anxious to help either the Germans or Austro-Hungarians, they prefer either of these, and particularly the Austro-Hungarians, to the Russians.

As the forces of the Central Powers advanced, they divided Poland between them for purposes of administration. Up to the Vistula, the railway line running from the southwest corner of Poland, where Silesia and Galicia meet, to Warsaw, was the line of demarcation. The section to the north was administered by Germany, to the south by Austria-Hungary. From the Vistula to the Bug, it is probable that a line from Warsaw to Brest Litovsk was chosen. Both these cities are under German control.

The Austro-Hungarians immediately brought

their civil officials and put them in charge of the civil administration. The troops of the active army keep moving forward as the front advances. The troops left behind for garrison purposes are always *landsturm*. While occasionally some of these older men are obliged to participate in an action, as a rule they lead quiet lives, guarding railways and bridges and garrisoning points far from the enemy's fire. Instead of having to risk their lives, most of them are adding about ten years to their existence, due to plenty of out-door exercise, simple but good food, and the regular habits which garrison life in a small town or village forces on a soldier.

The attitude of the Russians toward the civilian population varied. Up to the Vistula, they left most of the habitations and the population unmolested, with the exception of the men of military age, whom they took with them in their retreat. East of the Vistula, they compelled all the people to evacuate to the east as they retreated. West of the Vistula, towns such as Radom remained practically unmolested.

Prominent colored posters stuck on all conspicuous places telling the inhabitants of the rules which the invaders would enforce, were one of the most noticeable indications of a change of government, outside of the soldiers of the Central Powers. These notices were generally printed in at least two languages — Polish and German; the more

important, in three — Polish, German, and Russian.

Practically every telegraph pole bore prominently a notice in Polish, Russian, French, and German, warning the civil population that any one caught cutting or otherwise destroying the telegraph line would be shot. Among other notices was one prohibiting the keeping of carrier pigeons and stating that since the occupation many had been seen leaving town eastward bound. Another regulated food prices and prescribed the rate of exchange between rubles, marks, and crowns. Another regulated and severely restricted prostitution. In fact, everything was carefully regulated which might cause trouble of any kind or give opportunities to the unscrupulous inclined to profit at the expense of their neighbors.

A police force was established among the citizens of the town, working under the direction of the Austro-Hungarian field gendarmerie, which performs the provost duty in that army.

Conditions in Kieltse, so far as could be noted, were similar to those existing in Radom. The cafés and shops were doing a thriving business. The cafés as well as the hotels unearthed the wine they had had to hide until the Russians departed. The shops still bore signs in Russian, except that here and there the more enterprising owners were putting up ones in German. The schools were open, apparently with the usual attendance.

Every afternoon a Hungarian military band gave a concert in the park. These were always well attended, not only by officers and soldiers of the invading armies but by the population *en masse* in their best clothes, especially the women.

It was said that among the civilian men there were undoubtedly a number of Russian officers left behind as spies, as not only in Poland but in Galicia the Austro-Hungarians had found this to be a regular Russian practice. If captured, of course, it meant the death penalty.

In that part of Poland where the Russians had compelled the inhabitants to evacuate and where they had burned most of their dwellings, the problem of administration was simpler in that there were fewer people, but more difficult in that the few would have to be taken care of when the winter set in.

While the Russians endeavored to clear out all the people, many slipped into the nearest woods, of which there are many in Poland, and hid until the invader arrived. Others, having been concentrated in such places as Kobryn, east of Brest Litovsk, had to be abandoned by the Russian troops when pressed too hard by the troops of the Central Powers.

While those compelled to evacuate lost their homes because the Russians burned them, with few exceptions they did not lose their personal

belongings and live stock, for, as a rule, the evacuation was not accomplished at the last moment, but a day or two ahead of the retreat of the troops.

Therefore, when they were overtaken by the troops of the Central Powers, they nearly always had all their possessions with them. In every case the field gendarmerie would take charge of them and return them to what was left of their homes.

Long trains of wagons loaded with household goods of every description were a familiar sight in Poland. Coming down one side of the road as troops and trains moved up the other, could be seen children of every age, old men and women, accompanied by the young and middle-aged, driving cattle, horses, and frequently large flocks of geese. On arriving at their village, or what is left of it, their own headmen took charge. The first act generally was to hold a thanksgiving service in the church. Then they set about restoring some semblance of order.

Many have erected temporary shelter and although the crops for the most part are undamaged, indications are that before the winter is over, many of these people will be in need both of food and shelter.

As the invaders advanced across Poland, they filled in all Russian trenches but left their own

H. J. R.

POLISH REFUGEES

H. J. R.

RUINS OF NOVA ALEXANDRIA AFTER THE COSSACKS HAD BURNED IT

standing, thus having line after line ready for themselves in case of retreat but leaving nothing for the Russians.

In this work the inhabitants were employed, including many Polish peasant women, who are glad to take advantage of the opportunity to earn a little money. Thousands of men are at work repairing the railroads and roads, for which they receive pay.

On the whole, the people do not seem to fear the invaders. The Jews openly expressed their preference for them.

In practically all the towns entered, committees of citizens informed the German and Austro-Hungarian officers in command that during the Russian régime they had secretly organized military bodies. They offered the services of these organizations to fight Russia, provided arms, ammunition, and uniforms were supplied. This led to the formation of a Polish legion. Three brigades are now fighting with the Austro-Hungarians against Russia, while a fourth is in process of organization.

CHAPTER XXI.

SUMMARY OF THE RUSSIAN CAMPAIGN TO THE END OF AUGUST, 1915[1]

September, 1915.

FROM the beginning of the war until about the middle of November, 1914, the main German campaign was carried on in Belgium and France. During this time, a Russian invasion of East Prussia was driven back by Hindenburg, and an Austrian advance into Poland was driven back by the Russians, who, at the same time, advanced through Galicia to the foot of the Carpathians and almost to Cracow, thus isolating Przemysl. The Germans replied by advancing through central Poland to the line of the Vistula, with the result that the Russians had to withdraw troops from Galicia, thus allowing the relief of Przemysl. However, the Russians soon succeeded in driving back both the Germans and the Austrians. They even crossed the German-Polish frontier between Kaliss and Cracow and again reached the Carpathians. This Russian advance compelled the Germans to stop their attacks in southern Belgium and northern France and to transfer all available troops and guns to the Russian front. Their subsequent attacks carried them to a short distance in front of Warsaw, beyond which they were unable

[1] See map facing page 212.

to advance. While this was going on, an Austrian campaign in Serbia had ended with complete disaster and their expulsion from Serbia.

Thus, the beginning of 1915 found both sides resting on the defensive in France, with the Germans on the offensive against Russia in Poland and the Austro-Hungarians on the defensive in Galicia against the Russians. France and England virtually having announced that they would not be ready to take a real offensive until spring, the Central Powers had until spring to dispose of the Russian menace or else be attacked at the same time both in the eastern and western theatres of war, for them a very dangerous situation.

While this was going on, the British on March 10, started a general attack near Neuve Chapelle, which was directed at Lille, and was intended to be the beginning of the spring offensive. Had this proved successful, and had Lille been taken, the situation for the German line in France would have been so serious as undoubtedly to have compelled the withdrawal of German troops from the Russian front. However, while local successes were gained, the attack as a general offensive was a complete failure, with the result that Germany was not bothered in her Russian campaign.

On March 21, Przemysl fell, and the Russians started a general attack along the Carpathians, which throughout April slowly and steadily gained

ground, putting them in many places on the Hungarian side of the crest. Late in April and early in May, Hindenburg made his raid into Livonia, seizing Libau and a considerable part of the country to the east. Though this movement probably had among other objects the lessening of the Russian pressure in the Carpathians by compelling the withdrawal of troops to Livonia, the Russians continued their steady successful pressure in the Carpathians.

The beginning of May was for the Central Powers the darkest point to date in the war, for not only had they failed to dispose of Russia during the winter but they had not even stopped her steady progress in her campaign against Hungary; also there were signs that the French were about to start a heavy offensive in the region of Arras, and that Italy was about to join the Allies.

Had the French and British at this time been able to take a general offensive and maintain it with the same persistency displayed by the Russians since the beginning of the war, and had Italy come in at the same time instead of waiting for several weeks, the situation for the Central Powers would have been extremely dangerous. However, the British did practically nothing, while the French waited until the second week of May before starting heavy attacks in the Arras region, which, while locally successful, never reached the point where

they could be said to have affected the general conduct of the campaign in both theatres of war. The Italians waited until the third week of May before declaring war, and did not really start their campaign until June.

In the meantime the Germans initiated a heavy local attack in the region of Ypres, which was mistaken by many to be a sign of the resumption of the German attempt against Calais. This probably was the impression they wished to produce in order to withdraw as much as possible the attention of the Allies from the preparations which were being made in western Galicia. When these preparations were completed in the first few days of May, the troops of the Central Powers, under General von Mackensen broke completely through all the Russian trenches along this part of the line. This was done on such a wide front that the Russian troops, both to the north and south of the break, were compelled to fall back to avoid being taken in flank and, perhaps, even in rear. The Central Powers continued pushing their advance, regardless of resistance, practically straight east until Przemysl was retaken and Lemberg was reoccupied. This forced the Russians almost out of Galicia. While this was going on, the French continued their attacks in the Arras region, with local successes but still unable to influence the general conduct of the war.

While the Russians in Poland to the north of the break in their line, had to retire, they in general held on to their position in central Poland. This resulted in the Russian line in central Poland still following a general north-and-south direction, while in southern Poland it turned and ran along an east-and-west line to a point near the Bug, where it again turned south along a line that took it east of Lemberg. The forcing of the Russians almost out of Galicia by the eastward drive of the Central Powers might be considered the end of the first stage of the Russian retreat. During the second stage the Germans attacked from the north, driving the Russians back on a general line from Grodno to Novo Georgievsk, the two northern fortresses of the Polish quadrilateral. At the same time they attacked from the west driving them back upon Warsaw and Ivangorod, the two western fortresses of the same quadrilateral.

Abandoning their advance to the east and leaving the Austro-Hungarians on the defensive in eastern Galicia, the Austrian Archduke Joseph Ferdinand and General von Mackensen advanced to the north against that part of the Russian line which ran east and west through south Poland between the Vistula and the Bug. Thus from the north, the west, and the south, the Russians were being forced back on the fortresses of Grodno, Novo Georgievsk, Ivangorod and Brest Litovsk, which make up the Polish quadrilateral.

It always has been recognized that the defense of Poland was a difficult problem, due to its having enemy territory on three sides. For this reason the fortresses of the Polish quadrilateral were built. They were intended to delay any quick advance which might be attempted at the beginning of a war, so as to permit of proper completion of Russian mobilization. They were to furnish a strong position from which Russian armies might advance into enemy territory. They were to give a retiring Russian army a strong position to fall back upon. Should the worst come and the Russian field army be driven into Russia proper, these fortresses by holding out would keep important rail and river centers from being used by the enemy, and would necessitate the detachment from the enemy's field army of considerable bodies of troops to besiege them. In other words, they would seriously hamper the enemy's advance, and should the Russian advance be renewed, would materially aid it.

In the third stage, the Germans continued their advance in Livonia toward Riga and occupied Mitau; while in Poland they pressed against the quadrilateral, with the result that they broke through on the east where they crossed the Vistula, on the south where they broke the Lublin-Cholm railway line and occupied Lublin, and on the north where they crossed the Narew. On August 4

they captured Warsaw, and August 5, Ivangorod. The fall of these two places, followed shortly afterward by that of Novo Georgievsk and Ossovetz, with a number of minor forts, permitted the Central Powers to occupy virtually all Poland, and by thus straightening out their lines, shorten it several hundred kilometers.

On August 25 Brest Litovsk fell, and on September 2, Grodno. Kovno had fallen August 17. This meant that not only had the Central Powers arrived in that part of Russia proper to the east of Poland but that the center of their line was in direct communication with the northern part in Livonia; and that practically all the main fortresses which protected Russia from invasion from the west had fallen into their hands and could be used by them as bases from which to operate against Russia.

Immediately Brest Litovsk was taken, troops were withdrawn from the center of the line and sent south with their artillery and trains. This was only one of many indications that the advance of the Central Powers had gone about as far into Russia as the high command intended. While the public and press both in Germany and Austria-Hungary frequently mentioned the possibilities of an advance to Petrograd, military circles were concerned only with the question as to how far it was advisable to go in order to establish a defen-

sive line similar to that held in France. This made it possible to free a large number of troops for an offensive in another direction, for it was believed that Russia would be unable to take a real offensive for at least six months, because of her heavy losses in captured artillery and in trained effectives, killed, wounded, or captured. The belief was that since France and England had been unable to make any impression on the line in the west, Russia would be unable, even when reorganized, to make any impression on such lines as the Central Powers might establish in the east. While the center of the line of the Central Powers in Russia advanced to Pinsk, such offensives as were continued consisted of a local attack in the north, leading to the capture of Vilna, unsuccessful attacks on Dvinsk and Riga, and an Austro-Hungarian drive in the south in the Rovno district successfully opposed by the Russians and even somewhat forced back. The general advance of the Central Powers into Russia practically came to an end in the first part of September.

MAP SHOWING
THE CAMPAIGN IN THE EASTERN THEATRE OF WAR
AUGUST, 1914–OCTOBER, 1915
To Accompany
"WHY PREPAREDNESS"
By
CAPTAIN HENRY J. REILLY
SCALE
0 10 20 30 40 50 60 70 80 90 100 MILES
Copyright, 1916, by Deuchadge & Company Chicago
KEY
First General Period: August, 1914
The first line of heavy fighting between the Russian and German–Austro-Hungarian troops.
Second General Period: Sept. 1–Oct. 23, 1914
The battle line after General von Hindenburg's advance to the Vistula River.
Third General Period: Oct. 24–Nov. 10, 1914
The Russian advance which compelled the transferring of the German general offensive from the western to the eastern theatre of war.
Where the battle lines of the second and third general periods were coincident.
Fourth General Period: Nov. 11, 1914–May 1, 1915
The battle line at the end of April, 1915.
Fifth General Period: May–July, 1915
The battle line just before the fall of the Polish quadrilateral of fortresses.
Where the battle line of the fourth and fifth general periods were coincident.
Sixth General Period: August–October, 1915
Approximate position of troops at the end of the general offensive of the Central Powers in the eastern theatre of war.
Fortresses and fortified areas.
International boundary line.
Note—
The campaign to the eastern theatre of war may be divided into six general periods, as follows:
First General Period: August, 1914
The Russians invade East Prussia from the east and south; the Austro-Hungarians invade southeast Poland, while the Russians enter Galicia.
Second General Period: Sept. 1–Oct. 23, 1914
North—
The Russians, compelled to retreat across their frontier, later force the Germans back into East Prussia.
South—
The Russians advance, penetrating as far as the Carpathian Mountains and to the vicinity of Cracow; but due to Hindenburg's advance to Warsaw and to Ivangorod, the Russians retire to the San River.
Third General Period: October 23–November 10, 1914
The Russians force Hindenburg out of Poland, and cross the German frontier in several places; they advance from the San River to the vicinity of Cracow and in some places cross the Carpathian Mountains into Hungary. This Russian advance compelled the Germans to transfer their general offensive from the western and to the eastern theatre of war.
Fourth General Period: Nov. 11, 1914–May 1, 1915
The Russians are driven back to positions before Warsaw. Heavy fighting takes place all along the line without marked results, except in the north where Hindenburg advances capturing Libau and in the south where the Russians advance over the Carpathian Mountains into Hungary.
Fifth General Period: May–July, 1915
Mackensen's victory along the Dunajec, resulting in the Russians being forced back on the Polish quadrilateral of fortresses.
Sixth General Period: August–October, 1915
The fall of most of the Russian fortresses and the advance of the armies of the Central Powers to the Riga-Dvinsk-Rovno line, marking the end of the general offensive in Russia of the Central Powers.
GULF OF FINLAND
PETROGRAD
BALTIC SEA
GULF OF RIGA
RIGA
DVINSK
KOVNO
KÖNIGSBERG
DANZIG
GERMANY
GRODNO
THORN
WARSAW
BREST LITOVSK
IVANGOROD
KOVEL
ROVNO
PRZEMYSL
CRACOW
CARPATHIAN MOUNTAINS
AUSTRIA-HUNGARY
RUSSIA
ROUMANIA
Libau
Tukkum
Lemburg
Mitau
Sessau
Jorischki
Murowjewo
Niemel
Radsiwilischki
Schadow
Montwidow
Tilsit
Niemen
Insterburg
Willkowisk
Seirny
Lida
Vilna
Molodetschno
Minsk
Soltonowka
Pinsk
Kobryn
Pripet River
Kolenkowitschi
Dnieper
Lukow
Siedlce
Lowicz
Skiernewice
Lodz
Brzezin
Kalisz
Plock
Vistula
Thorn
Bromberg
Schneidemühl
Konitz
Marienburg
Allenstein
Elbing
Dirschau
Schlawe
Neidenburg
Ostrolenka
Przasnysz
Rozan
Bielostok
Grodno
Augustowo
Kolno
Lyck
Johannisburg
Bobruisk
Rogachev
Shlobin
Gomel
Ryechitsa
Lunajez River
Kobrin
Brest Litovsk
Iwangorod
Pulawy
Ivangorod
Radom
Nowa Alexandria
Lublin
Cholm
Krasnik
Kielce
Ostrowiec
Sandomir
Tarnow
Jaroslau
Przemysl
Lemberg
Grodek
Tarnopol
Chmelnik
Rovno
Iskorost
Dorodjanka
Kiev
Zhitomir
Berdichev
Fastow
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Monastyrtschtsche
Husiatin
Zaloszy
Galworan
Koroditschtsche
Slobodka
Okna
Dniester
Czernowitz
Kolomea
Kuty
Nizniow
Holicz
Stryj
Sambor
Jaroslau
Przemysl
Jaslo
Gorlice
Tarnow
Dunajec River
Biala
Wadowice
Oswiecim
Teschen
Ratibor
Oppeln
Lublinitz
Breslau
Neustadt
Gleiwitz
Kreuzburg
Kempen
Posen
Ostrowo
Kalisch
Szered
Losonez
Miskolcz
Ungvar
Munkacs
Csap
Theiss River
Debrezin
Nagy Banya
Sziget
Budapest
Gyetsay
Resen
Bjelaja
Storaya Ruza
Garodzy
Pskov
Forkhor
Peregina
Bjeshonjy
Traizy
Yilkiya
Berzig
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Mokanje
Goradok
Vitebsk
Rudnja
Krassnoje
Borzsuki
Orsha
Tolotschin
Saltonowka
Polotsk
Western Dvina River
Yakobstadt
Mitau
Sessau
Jorischki
Murowjewo
Libau
Tukkum
Lemburg
Dwina
Glasmanka
Ryeshitso
Pskov
Forkhor
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Bjeshonjy
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Western Dvina River
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Vilna
Niemen
Tilsit
Insterburg
Willkowisk
Seirny
Grodno
Augustowo
Kolno
Lyck
Johannisburg
Bielostok
Rozan
Ostrolenka
Przasnysz
Thorn
Bromberg
Schneidemühl
Konitz
Marienburg
Allenstein
Elbing
Dirschau
Schlawe
Danzig
Neidenburg
Vistula
Plock
Bug
Narew
Bobruisk
Rogachev
Shlobin
Gomel
Ryechitsa
Lunajez River
Kobrin
Pinsk
Pripet River
Kolenkowitschi
Dnieper
Lukow
Siedlce
Lowicz
Skiernewice
Lodz
Brzezin
Kalisz
Warsaw
Brest Litovsk
Iwangorod
Pulawy
Radom
Nowa Alexandria
Lublin
Cholm
Krasnik
Kielce
Ostrowiec
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PART IV
MODERN BATTLE

CHAPTER XXII

THE VOLUNTEERS' FIRST SIGHT OF WAR

September, 1914.

AN army must have good weapons and must be well trained in their use. Although this is generally conceded, it is not nearly so well understood that, above all, an army must have high morale. An army without morale is like a person without a soul — dead and already on the road to decomposition. When troops leave home, while bands play, people cheer, and their friends load them with presents, war seems pleasant, and enthusiasm is high; but when troops, and particularly green ones, for the first time come in contact with a large number of wounded, war seems anything but pleasant, and enthusiasm is dampened considerably. It is then that morale counts.

No better example of some of the disconcerting sights which young green soldiers first see in time of war can be had than the experience of the first battalions of British territorials sent to France. Made up of a very high type of young men, they were eager to get to the front and finally, much to their delight, were sent to France. However, instead of the battlefield they were sent to a British base just outside of Paris. Here the trains of wounded bound for the coast put off those

so seriously hurt that it was doubtful if they could continue the journey longer and live. They were carried into large, gloomy railway sheds, with concrete floors and walls and galvanized iron roofs. The battalion of British territorials was quartered in similar sheds and, day and night, in addition to guarding the base, helped carry the wounded out of the cars into the sheds, and out of the sheds into motor ambulances which took them to hospitals in Paris. Here for many weeks the men of this battalion had their first sight of war. No excitement, no tremendous interest, no exaltation — nothing but the sight of the gloomy railway yards and sheds, and long trains unloading the severely wounded, many of whom died before getting any farther.

Generally the trains carrying the badly wounded are made up of freight cars, the floors of which are covered with straw, the wounded men lying on stretchers. On removal from the train, the men are laid out in rows in wards separated by canvas hung from the roof supports of the sheds.

A card is tied on each wounded man stating the nature of his wound and the treatment he has received. The British doctors, and also American doctors belonging to the American motor-ambulance service, go rapidly from man to man. The worst cases are sent at once to the American hospital, which at present receives most of its wounded from this station.

The American hospital, with the generous aid of a number of private individuals and a motor-car company, has arranged a motor-ambulance service, which extended to the actual field of battle when the fighting was near Paris, and since then has been bringing wounded from the British base to the hospitals in Paris.

The American motor-ambulances are fitted with the regulation French stretcher. The British wounded come in on British stretchers, which are too big for the American ambulances. This necessitates moving each wounded man from one stretcher to another, which frequently is a very painful operation, especially if their wounds have not been dressed for some time, this being occasionally as much as a week. No attempt is made to dress wounds at the base, except when absolutely necessary, as the less a wound is interfered with until it can be properly dressed, the better. Where bandages have slipped, they are replaced. When men are in great pain they are given a hypodermic injection.

After the wounded have been transferred to the ambulance stretchers, the territorials carry them to the motor-ambulances which are sent to Paris in groups of four and five. Among the territorials serving as privates are several doctors who have been of considerable assistance. The American drivers and orderlies of the cars, when not otherwise

engaged, and the British soldiers, go among the wounded giving them water, cigarettes, and, to those who are permitted to have it, food. Those asleep or unconscious, they keep covered with their blankets, and keep the flies from their faces.

Many of the wounded are glad to talk; it affords them relief from the dreary, seemingly unending days and nights passed in pain, surrounded by others in the same condition. Most of them tell very much the same story — of being either on the firing line or advancing under fire; of shrapnel bursting in different places near them, of a sudden explosion right in front or alongside of them, and a cloud of dust and smoke, and then of finding themselves on the ground hit in one of more places. Then came hours, in some cases more than a day, when they lay there, sometimes helpless, at other times succeeding alone, or with the aid of some other soldier, in roughly adjusting the first-aid package, too often entirely inadequate in the case of shrapnel wounds which are frequently accompanied by fractures.

In many instances the trying trip back to the field hospital, where the wounds are given the first proper dressing, is the most painful memory of all, as by that time the numbness, generally following the receiving of the wound, has worn off and has been succeeded by great soreness. As most of the wounded had made this part of their

H. J. R.

LIGHTLY WOUNDED ARRIVING AT EVACUATION HOSPITAL
ON EDGE OF THE BATTLEFIELD

H. J. R.

BRITISH WOUNDED AT BETHUNE
Heavily wounded waiting to be taken in the evacuation hospital

journey in springless country carts, they suffered considerably. The railway journey to the base, while not nearly as bad as that in the carts, was hard enough, as it had seemed interminable. Whenever the train stopped or started, the jerks had hurt the wounds, causing many to cry out. Like all badly hurt men who learn very quickly to associate movement of any kind with pain, these soldiers were anxious to know where they were going next, how they were to be taken there, and how far off their destination was. The answer that they were going in motor-ambulances having excellent springs, over good roads, to a field hospital a few miles from Paris, where their wounds would be properly dressed, where they would be bathed, put in clean night-clothes and clean, warm beds, and then properly fed, cheered them up somewhat.

All of the British wounded are regulars, and consequently trained soldiers, and many have seen considerable service. Several said that the Boer War was a skirmish compared with the present conflict; that in one month they had now seen more hard, serious fighting than in the whole of that war. Some told of attacks against the German position carried to within a few hundred yards of the German trenches and of then being forced back. All their stories showed that the Allies are confronted by a strongly intrenched German position,

which the Germans are stubbornly holding and the Allies determinedly attacking.

Some of the wounded had had remarkable experiences, and many had shown remarkable fortitude. One soldier had a shrapnel burst just alongside, covering him with dirt and smoke, but not touching him. He called to a man on the other side: "It is not my turn to-day." Hardly had he uttered these words before another shrapnel burst directly in front of him. Both his arms were broken by flying fragments, while the rest of his body did not receive even a scratch.

One big, determined sergeant, the type of non-commissioned officer of regulars well known to those familiar with the British and American regular armies, had one of his feet all but cut off by a shrapnel burst. It was hanging by some shreds of flesh only. He cut it off with his bayonet, and then rolled down the side of the high railway embankment on which he had been wounded and where shrapnel was bursting everywhere, into the ditch below. He dragged himself along this to a dressing station. While in the shed waiting his turn to be taken out, he was told that he was to be transferred to another stretcher. He asked where the other stretcher was. The attendant pointed it out, and at that moment was called away. When he returned, he found the sergeant on the stretcher; he had moved himself.

Since the most serious wounds are generally those made by shrapnel, and since the most seriously wounded are being put off at this British base, the attendants here have come in contact with practically nothing but shrapnel wounds, which has caused some to jump hastily to the conclusion that shrapnel is responsible for most of the wounded.

It is a bit hard on the members of the battalion of territorials to inaugurate their first service at a base where they see nothing but the most severely wounded, and not even those when they are first struck but days afterward when the paleness of their faces and the increased soreness of their wounds only accentuate their dirty and suffering condition. One of them said: "We had no idea it was as bad as this; we thought it would be glorified big-game shooting. So far, none of our companies has been to the front except to bring back German prisoners. It begins to look now as if we were to be used on the lines of communication only, and I don't know but we shall be better off."[1]

At the base there is one German hospital corps man who was captured with some German wounded whom he was tending and refused to leave when the German retirement took place. Although he speaks no English, all the British at the base are his friends, as they say he is the most gentle and the most competent nurse they have seen.

[1] This battalion was later sent to the front and acquitted itself very well.

In one corner of one of the sheds there are about fifteen perfectly healthy, but rather bedraggled-looking British soldiers under a strong guard of territorials; two are said to be deserters, several looters, and the rest stragglers and drunkards, all waiting trial by a court martial at the base.

CHAPTER XXIII

THE APPROACH TO A MODERN BATTLEFIELD

April, 1915.

IN the western theatre of war, due to the multiplicity of railways, the troops generally approach quite close to the battlefield by rail. Rail-heads are always scenes of great activity. A train will come in loaded with infantry. A few minutes later they form outside the station with their packs slung, and march toward the battlefield.

Long hospital trains stand on sidings with strings of motor-ambulances coming up, each discharging a number of men either with head, arm, or leg bandaged, or men flat on stretchers who are carried to the train.

Long lines of freight cars are unloading food and hospital supplies of all kinds, infantry and artillery ammunition, and perhaps wagons and motor trucks. Seemingly interminable lines of big motor trucks are backing up or getting their loads, and then forming in column in a nearby street, ready to start for the refilling points just off the battlefield.

A town at the rail-head is also a busy scene if, as is generally the case, it is the headquarters of an army or army corps commander. Headquarters troops are to be seen everywhere, as are also staff officers, no longer mounted on horses but in motor-

cars, because of the immense distances which they are obliged to cover.

The *Grand Place* of the town, usually with a cathedral on one side and the city hall on the other, ordinarily so quiet except on market-days, is the scene of tremendous activity. Here the mounted gendarmerie collects all the refugeés from the country which is the scene of action. Nearly always among them are German spies who have taken advantage of the general exodus to come well within the Allies' lines. Here are parked the motor-trucks not for the moment in use. Here are motor repair shops, which are machine shops mounted on motors. Here are people crowding around the city hall and probably also the provost-marshal's office, desirous of procuring passes to go to one place or another.

Taking a street which leads to the road to the battlefield, a large four-story brick building is passed with a sign: School for Young Girls. This is now an evacuation hospital, where the wounded brought from the battlefield are collected and kept until they can be shipped by the hospital trains to the real hospitals at a base town, many miles in the rear. Coming out of the door is one motor-ambulance after another, each loaded with wounded and bound for the railway station where the hospital train is drawn up.

On the outskirts of the town a new graveyard

is passed with numbers of new graves, each marked by a simple cross. These are the graves of the men who died while being brought from the battlefield or while in the evacuation hospital. Farther along on a hill is a field wireless station.

Along the road outside of town a long string of sixty or seventy empty motor-lorries is seen coming up from the front. Many times, single ambulances or convoys are passed. Some are full of seated men, wearing torn and muddy uniforms, and all with bloody bandages on different parts of them. Others are filled with stretchers holding men so seriously wounded that they are lying flat. Nothing can be seen of these men as the ambulances go by, except perhaps the blanket which covers them and their shoes sticking out, or if wounded in the leg or foot, the bandage which covers the wound.

At times, it is necessary to pass along lines of heavily-loaded lorries bound for the front.

Several miles out of town, on one side of the road, there is a number of the large tents which shelter aeroplanes. On closer approach, several aeroplanes are seen resting near them in the open field. After a preliminary run on the ground, one bounds in the air, ascending higher and higher, until it finally heads straight for the front.

The country having been recently fought over by the advance troops of both armies when they were feeling for each other during the great flanking

movement after the battle of the Marne, old shelter trenches are seen occasionally, while here and there is a farmhouse which has been destroyed partially or wholly by shell-fire.

As the top of a small rise in the road is reached, little white puffs can be seen against the blue sky, way in the distance. These are the first signs of battle. They are the bursts of shrapnel fired at an aeroplane somewhere over the trenches. The aeroplane is so small at that distance that it cannot be seen, while, of course, it is impossible to tell whether the shrapnel is being fired by the Allies' artillery or by that of the enemy.

When about three miles from the rail-head, the first faint sound of firing can be heard, which does not permit of clearly distinguishing the different kinds of fire.

A little farther on a long line of wagons is noted, drawn by horses and pulled up to the side of the road alongside of piles of food, ammunition, and supplies of all kinds. This is a refilling point, and it is outside of the zone of artillery fire. Here is as far as the motor supply lorries get, as from this point the supplies are taken by the horse transports as near to the divisions as they can get without being subjected to too heavy an infantry or artillery fire. The rest of the distance must be covered generally at night and frequently by means of push-carts or by the men themselves carrying the supplies.

About a mile farther on, another town is entered, this being the headquarters of a division. Here are found even more signs of activity than at the railhead. The sound of firing is much louder; the long roll of infantry fire and the burst of machine gun fire can be distinguished from the artillery fire.

In the *Grand Place* are several holes in the pavement. Numerous windows have been broken and the front of a number of houses are badly scarred by fragments, the result of several bombs dropped the day previous by an enemy aeroplane.

As the open country is reached, on leaving the town, the smoke of bursting shells can be seen almost everywhere to the front.

Way to the front, two aeroplanes, little more than dots, are discerned — one going in a straight line, the other making big circles and dodging here and there. The one coming in a straight line has finished its reconnaissance and is returning. Little puffs of white smoke can be seen now in front of it, now behind it, now above it, now below it, some so near that it would seem that the aeroplane must surely be hit, but on it comes until out of range and safe, when by the colors marked on its tail and on its lower wings, it is recognized as an Allies' aeroplane. Puffs of smoke also are bursting around the other plane, some apparently quite a distance off, others much nearer. Finally it, too, starts straight back, and in spite of the firing finally reaches safety.

The road now is full of long lines of artillery wagons and of those parts of batteries which are left in the rear when the guns go into action. Long lines of caissons are met going back to the ammunition refilling points, while still more ambulances are seen, either empty and bound for the front, or loaded with wounded bound for the evacuation hospital.

In a farmhouse alongside the road a field ambulance is established. A crowd of men who, although wounded, are able to walk or hobble, are coming out and being assisted into the motor-ambulances. Others on stretchers lie perfectly still; while others on stretchers look around in a slow, painful way. In the rear of the building are parked the horse ambulances, which must wait for night before they can approach the dressing stations just on the border of the infantry fire zone.

In the field alongside the ambulances, some soldiers are digging graves for some of the wounded who died after reaching the field ambulance. Some graves already have been filled. Those of French soldiers are easily distinguished from the others, as the man's cap is always hung on the little cross, if there is one; if not, the cap is placed on the grave above his breast.

A little farther along, at a crossroad, underneath the trees along a hedge, is the horse ammunition column of an infantry battalion.

Coming up to the front, on a parallel road, is a long line of motor-buses, full of infantry. As they reach the crossroad, near the ammunition column, the buses stop, the infantry get out, the companies are formed, the line breaks into columns of fours and moves forward.

Down the road in a field, probably a thousand yards ahead, is a brilliant white flash, then a dense cloud of black smoke, followed almost immediately by a loud report. There are other less brilliant flashes and clouds of white smoke, all very much in the same vicinity. Several of the enemy's high-explosive shells, including one of their biggest — the one which gave off the black smoke — have exploded in that field. The beginning of the artillery fire zone has been reached. The column of infantry abandons the road, cuts across a field to the side farthest away from the one where the shells dropped, and, reaching a hedge and line of trees running in the right direction, merges into this natural concealment as it continues its movement toward the front.

The beginning of the region of vacant spaces now has been reached. This is one of the most striking phenomena of the battlefields of modern war. Up to the edge of the artillery zone, the roads are crowded with all the life of an army. The small villages are hives of activity of one kind or another. Once the artillery zone is entered,

all is changed — here are long vistas of roads and stretches of fields with apparently nothing on them or around them; here are groups of trees and stretches of undergrowth apparently deserted; here are houses with no signs of life. When the enemy's artillery fires on any part of this, there are, during the period of fire, violent disturbances in the locality where the shells are bursting, but only in that particular vicinity. Even at the height of a big battle, the distance to which the artillery can fire is so great and so much country is included in the artillery zone that all of it cannot be covered continually by bursting projectiles. The storm of bursting projectiles is here for a time, and there for a time, as the officers directing the enemy's artillery fire have reason to believe that in this or that locality troops or guns are hidden.

These apparently vacant spaces in which the troops and guns are concealed carefully stretch right up to the infantry trenches. The trenches are frequently five thousand yards or more; that is, perhaps three or more miles, from the point where the outer edge of the zone of artillery fire commences. In a period of calm, those who do not know the extent of the zone often enter these spaces without realizing the danger. A road along which there is not the slightest sign of any shell-fire one moment, may the next be a regular

inferno of bursting projectiles. The stretch of several hundred yards from one house to another, across an apparently innocent field, may be, and frequently is, just the district to which some one of the enemy's snipers knows the exact range, and he is carefully watching for any individual who unwittingly may wander across it.

Once the artillery zone is entered, it is best to keep off the roads and away from prominent objects, at the same time watching where groups of shells fall most frequently and trying to pick out safe country between.

On approaching a point near where the shells were seen bursting in the field, suddenly there is a burst of flame followed by a loud report apparently from a hedge, this followed immediately by five other bursts of flame and loud reports easily distinguishable above the noise of the combat.

Looking closely, it is seen that the guns of a heavy battery are distributed in an orchard back of a hedge. Each gun has had a little house of twigs and branches built over it which so conceals it that, except by looking after the flash and report have attracted attention, it would be quite possible to pass by without knowing that a battery was there. This was the target the enemy was trying to hit when the shells were seen bursting in the nearby field.

Farther along is what was a main highway,

which runs diagonally toward the front. For a considerable distance, up and down it near a crossroad, and to each side on the crossroad, there are craters which were made by bursting shells. One of these is fully fifteen feet across and six or seven feet deep; this is a hole made by a big German mortar. The other holes vary in size, the smallest ones in the macadam being two or three feet across and one and one-half to two feet deep. Some of the holes are in the middle of the road, others in the fields to each side. Big and little branches of trees and twigs are scattered around everywhere.

Still farther on, placed along the undergrowth at the edge of a wood, are the limbers and horses of a field battery in action. In their position stretched along the edge of the wood, it would be very difficult for an aeroplane to see them.

An irregular line of flashes in a nearby field, back of a line of hedge and trees, shows where the guns of the battery are placed. Not more than one hundred yards in front of the battery, there are several vivid flashes overhead followed by loud reports and small clouds of white smoke. At the same time an enemy aeroplane is seen, way up in the air; it probably has located the battery by the flash of its guns as they are discharged and is helping its own guns to find it with their fire.

Five hundred yards farther to the front, there

is a group of brick farm-buildings, connected with one another. Loopholes have been cut in the walls, and the doors and windows have been barricaded. From this group of farm-buildings to each side runs a long irregular line of trenches, having barbed wire entanglement in front of them. These defenses are unoccupied, but are ready, should the infantry in front be driven back.

The roof of one of the farmhouses has been badly shot away. In a corner of it, protected by sandbags, is an artillery observation officer, who from his position can see the enemy's trenches stretching in a thin, whitish line across the fields which show between the groups of trees and houses dotted here and there over the country to his front. By means of a telephone, he communicates the result of their fire to the officers in charge of the guns of his battery.

Now and then, against the brick wall is heard a thud, and a piece of brick falls off the wall. Occasionally the whistling and whine of a ricochet bullet can be heard in the air. Here and there, in the nearby fields, little spurts of dirt fly up. The edge of the infantry fire zone has been reached. Above the almost continuous noise of the artillery fire, the infantry fire is heard swelling into an enormous volume of sound, and then decreasing, only to rise again. Through it all rises, now in front, now on one flank, now on the other, some-

times more or less all along the line, the unmistakable riveting-hammer sound of machine guns. In spite of all this, the express-train noise of the bigger projectiles of the enemy's artillery which pass overhead commands the attention. Where high-explosive shells burst within the range of vision, the attention is attracted immediately to the sudden white flashes, like the short flashes of a heliograph in a bright sun.

To the left in a small low farmhouse is a dressing station, reached under the protection of the line of trenches running out from the artillery observation station. Inside, safe from infantry fire, but not from shell fire should any of these projectiles strike the house, are a surgeon with several hospital corps men and a number of wounded. Near the house is a haystack. Starting from this haystack, running along and continuing under a hedge, is a narrow trench which zigzags toward the front. Out of the trench, and back of the haystack, and then across to the farmhouse, there come, from time to time, slightly-wounded soldiers. The surgeon attends to their wounds and makes them as comfortable as possible inside the farmhouse.

The trench, which starts by the haystack and runs along the hedge until deep enough to hide men, is the communicating trench, leading up to the support trench, and beyond it to the firing

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FRENCH MUNITION WAGONS EN ROUTE TO THE FRONT

trench; it is simply a ditch about seven to eight feet deep, and just wide enough to permit of a man walking in it. To prevent the enemy from firing down it, it zigzags, running first to the right then to the left, and then to the right, and so on, instead of approaching the front directly. In this manner it covers a distance to the front of about five hundred yards, and then opens into a narrow deep trench, running to the right and left. This is the infantry support trench. In it are the supports squatted down in the bottom of the trench, their backs against the front face of it, some smoking, some talking, and others snatching sleep as best they can. On the way to the support trench, a communicating trench is passed with the sign: "To headquarters ——— Battalion." In the support trench can be heard the constant *—sste —sste —sste* —of the infantry bullets which pass overhead, with little thuds as they strike the parapet and occasionally send little sprays of dirt down into the trench.

From this trench, leading forward, are a number of communicating trenches, which open out into a long, irregular line of trench, broken up into sections by traverses. All along the top of the front face of the trench are steel plates having oblong holes, through which infantry soldiers are intently firing. They are firing across a stretch of open field with a barbed wire entanglement in

the foreground, at the flashes from a line of loop-holes in a long, low mound of earth with a barbed wire entanglement in front of it, not two hundred yards away.

CHAPTER XXIV

HOW THE ARMIES HAVE BECOME ENTRENCHED[1]

April, 1915.

NEAR —— at about noon, on a certain day in October, a long line of French skirmishers is advancing to the east upon a gentle slope which would seem almost level were it not for the fact that a crest can be seen ahead, and beyond it still another crest.

The German infantry has taken position in a more or less sunken road which runs along the farther crest; this infantry and their field guns well behind the second crest are doing the best they can to stop the advance of the French infantry.

As the French advance, there is always a certain amount of cover given by the crest in front of them, sometimes the variations of the ground give complete cover, except from artillery fire. Here and there, men drop, killed or wounded from rifle bullets, but generally it is the enemy's shrapnel which does the most damage. Most of the shells drop in front of or behind the line, or in the intervals between the groups of the line of supports which is following the firing line a considerable distance to the rear; however now and then one bursts just right, and a little group of men fall to the ground.

[1] See diagram facing page 276.

As the different parts of the line reach the points where the slope flattens out and is in plain view of the second crest where the Germans are located, men commence to be hit in suddenly increasing numbers. They are now in plain view of the Germans, about a thousand yards away. The German infantry increases its fire, while the riveting-hammer of the machine guns commences up and down their line.

Some parts of the French line already have thrown themselves down and have commenced to fire at the Germans. Other parts, which attempt to go beyond and continue the advance, have a good many men hit. The balance of the men run back quickly, throw themselves down and commence to fire with the rest of the line. Some of the men from the supports are brought up and strengthen the fire of the line. This increase in fire of the French line beats down the German fire, as is shown by the fact that the French losses are less.

Following this, the French attempt to advance by moving forward a section at a time, while the remaining sections fire, and then try to run up to the new line established by the advance sections. When the designated sections rise and run forward, the German fire increases, particularly that of the machine guns. Some of the sections go forward, but only with considerable loss. Others suffer so

much as they start that the survivors return to their old positions.

The supports then come up with a yell, and the whole line goes forward irregularly. The German fire is so great and produces such loss, however, that the men soon throw themselves down on the ground and put their knapsacks in front of them to get such protection as they can. While some men fire, others unstrap from their knapsacks their entrenching tools, which are little picks and shovels. Soon the whole line is busily at work, each man sometimes firing and sometimes scraping up in front of him with his tools such earth as he can to protect himself from the enemy's fire.

During the afternoon, two other attempts are made to advance, but each time the fire is too great. The only thing left to do is to remain where they are until darkness and then to entrench. The hasty trenches which the men are digging and constantly deepening as they have the opportunity during the afternoon, are nothing more than a zigzagging line of individual shallow ditches with the longer axis pointing toward the enemy and all the dirt taken out put in a little parapet around the end toward the enemy. In this way, when completed, a man lying flat on his stomach has protection from rifle bullets but not from shrapnel bursting overhead, as lying at full length he is exposed to shrapnel bullets coming from above.

While the firing line is holding its own and entrenching as best it can, the supports back of the crest, and therefore under more cover, also are entrenching. Being under a much less heavy fire, they are able to build what is called a kneeling trench. Instead of each man scraping a little hole for himself, as the firing line is doing, they dig a long ditch and throw all the earth taken out to the front. It is dug deep enough for a man kneeling in it to fire over the parapet made by the earth thrown up; it is just wide enough to permit men to kneel and fire. The narrower a trench is, the more protection it furnishes from shrapnel and other artillery projectiles which explode in the air above it.

In the meanwhile, the heavy entrenching tools, which are full-sized picks and shovels, have been brought up to the edge of the infantry fire zone. With the coming of darkness, the fire gradually dies out. As soon as it is really dark these heavy tools are distributed, and everyone sets to work digging standing trenches, the lines of which are marked by the officers. As the French soldiers work along their front line, they can hear the occasional noise of picks and shovels coming from the ridge, nine hundred yards away, where the Germans are entrenched. Each side is busily engaged, so that the morning finds them protected from the fire of the other.

In the morning, there is a long, more or less irregular line of trench along the position where the German fire had forced the French infantry to stop the afternoon previous. At intervals, along the line where the supports had dug their kneeling trenches that same afternoon, there is a comparatively irregular line of standing trenches. From this second line of trenches, there are narrow trenches six to seven feet deep which zigzag to the front, first to the right, then to the left, and so on, until the first line of trench is reached. These zigzagging trenches are the *communicating trenches;* they are the means of getting from the second-line to the first-line trench without exposure to the enemy's fire. The first- and second-line trenches each are standing trenches — that is, they are deep enough so that when a man stands upright to fire, he can do so comfortably over the top of them.

If a long, straight line of trench were built and a shell exploded right in it, there would be nothing to prevent the pieces flying a considerable distance down the trench to the right and left. In the same way, if any of the enemy should succeed in firing down the trench, they could shoot down its whole length. This kind of fire is called *enfilading fire.* To prevent it, every ten or fifteen yards along the trench pieces of earth, the full height of the trench and three or four feet wide, are left standing, a passageway being cut to the rear around them.

These pieces of earth are called *traverses*, and prevent pieces of an exploding shell or enfilading fire from doing damage in more than one of the fifteen- to twenty-yard long sectors of the trench. The Germans accomplish the same object by having sharp loops to the rear at intervals along the trench.

At the beginning of the war, the Allies threw the earth to the front when they dug trenches. This saved labor, as the earth thrown to the front gave protection and, therefore, the trenches did not have to be so deep. The Germans never did this because the line of earth showed from the front where the trench was; they always had the top of their trench practically level with the ground, and did everything they could to make the field, or whatever it was dug in, look undisturbed. The Allies now do the same, except when the trenches are so near there is no object in trying to conceal their position.

Once the troops are under cover, they can proceed to add to their trenches until they are compleated. Sometimes trenches are prepared beforehand along positions which it is expected that the army may take up. This work is generally done by the engineer officers and soldiers of the army, who hire sufficient labor from among nearby civilians. Trenches prepared beforehand are naturally the best placed with respect to their position, and are also the best built, as enough time can be taken and proper materials can be obtained.

At the beginning of the war, the favorite position for a trench was where it would have a long, gentle, down-hill slope in front of it. However, the fire of the heavier guns of the artillery has proved so destructive to trenches that now there is a tendency to build them on a long, gentle slope on the side of the crest of the hill away from the enemy. In this manner, the enemy's artillery cannot fire on them directly, as it cannot see them. In this position trenches are still difficult for infantry to take, because after the enemy's infantry has reached the crest, they have to go across a considerable open space swept by the fire from the trenches and unsupported by their own artillery who no longer can see where they are.

The greatest difference between trenches prepared in advance and those constructed under fire lies in the obstacles which are placed in front of them. In a position prepared in advance, long lines of trees are cut down and laid in parallel rows on the ground, their branches interlocked and pointing toward the enemy. Series of circular holes are dug without room between them for men to walk on, and with sharp sticks at the bottom. Lines of barbed wire entanglement, made by driving in the ground long lines of stakes generally about four feet high, are put up from fifty to a hundred yards in front of the trenches. The tops and bottoms of these stakes are connected by lines of wire

running horizontally and diagonally from one to the other. The front strands only are of barbed wire, although sometimes all the wire used is barbed.

Different kinds of entanglements are made. The whole idea is to place an obstruction which will furnish no cover a short distance in front of the trench. In this way, attacking parties must stop under a very close fire while they try to cut their way through. In a position prepared under fire, the barbed wire entanglement is constructed at night. If it cannot be built at night, a substitute is thrown out from the trenches, consisting of cubes of barbed wire, the diagonals of which are wooden sticks. If there is a ditch filled with water or a stream in front of the position or around any part of it, a barbed wire entanglement frequently is placed in it below the surface, so that it cannot be seen.

But to go back to the men who on that night in October have dug themselves in.

While they have a fairly good trench, there is yet a good deal to be done. If they all remain in the front-line trench, and it is bombarded by the heavy artillery of the enemy, they will suffer considerable loss. If all except a few sentinels go back to the second-line trench, they will be so far off that in case of an infantry attack they will be unable to reach the first trench in time to stop it. Therefore, twenty-five to seventy-five yards back of the

firing trench, depending upon circumstances, they start digging what really become underground rooms. Starting from each communicating trench, they dig parallel to the firing trench a narrow deep passage to the right and one to the left. When these have progressed six or seven feet, they enlarge them into rectangular trenches twenty to thirty yards long and eight or nine feet wide. Along the center of the bottom of these, running from one end to the other, they dig a ditch about three feet wide and two feet deep, which leaves a fairly wide bank on each side. These banks are covered with straw, and here the men sleep and rest. These ditches are roofed over with logs and covered with earth up to the level of the ground. The thickness of earth is enough to stop any but the very heaviest projectiles; the chambers are high enough to enable the men to stand up comfortably. Here the men habitually live and eat.

When no attack is going on or expected, or during an artillery bombardment by the enemy, only sentinels are in the firing trench, the rest of the men being in the dug-outs. The Germans generally put thick overhead cover at intervals along their first-line trenches. The men get under these for protection from artillery fire. When using their rifles, they stand in the intervals between these overhead covers. They have well-made rest chambers in their last line of trenches.

In addition to the building of these dug-outs, little ditches must be dug along the trenches for drainage purposes. These run into some corner in the connecting trench, where a large circular hole is dug to receive the water drained off by them.

As soil with no support frequently will break down, it is necessary to place along the front face of the trenches what is called a *revetment*, which consists sometimes of sheets of galvanized iron supported by stakes, but more often of upright stakes having pliable branches of trees and hedges interwoven around them, in the same way that a basket is made. Logs also are cut lengthwise and are used for the revetment.

Not only do the British, French, and Belgian trenches differ, but very often trenches made by the same army vary a great deal. Sometimes there are no support chambers, and the men live and stay always in the firing trench. In these cases, they burrow under the front face of the trench and fill the holes with straw. Here they get such sleep as they can.

In many places where the trenches have approached so close to each other that there is no longer need to conceal their position, *head-cover* of one kind or another has been built. Head-cover is simply something placed along the front edge of the trench, with holes in it for the rifles, and high enough so that when the men fire, their heads

are concealed from view from the front. Often these head-covers consist of steel plates having rectangular holes just large enough to stick a rifle through to aim comfortably. These plates are placed in vertical positions along the front face of the trench. Again sacks filled with earth are used not only to make these holes but to carry the whole parapet along at a height sufficient to hide the heads of the men behind it. Various other means are adopted to have the parapet high enough to protect men standing up, while leaving holes through which they can fire when necessary.

When the trenches are very close, often pieces of cloth are hung over these holes, so that when not in use the enemy's snipers cannot see when anyone passes by. As small as these rifle holes are, it is not uncommon for men using them, or passing by them when the holes are not covered by cloth, to be shot. General Manoury and General de Villaret were shot by the same bullet while looking through the same loop-hole.

The French use head-cover extensively. The British not so much, but as the war progresses, they apparently are coming to it more and more. In some British battalions the men had put up head-cover but were forced to take it down again by the higher ranking officers, who insisted that it interfered too much with the movement of the men when they jumped out of their trenches to make

an attack. Another reason given was that loopholes make too good targets.

In some few instances, trenches are also provided with overhead cover; that is, the top of the trench is covered with branches of trees or logs surmounted by a thick coating of earth. This gives protection from shrapnel and fragments of shells, but, of course, not from the direct hit of high-explosive shells.

As in most cases the support chambers are built just back of the firing trench, head-cover for the firing trench is seldom seen. Sometimes a head-cover consisting only of branches of trees with their leaves is put over a trench; this is not for protection from fire, but to deceive enemy aviators who fly over the position.

Where the line runs through swampy land, breastworks must be built, for trenches, if dug, immediately fill with water. These breastworks are of various kinds. Where they have to be built more or less under fire, they generally consist of an earthen bank supported by a revetment of sheets of galvanized iron held in a vertical position by stakes; or of logs, or of branches of trees woven around vertical sticks like a basket. Using this as the front wall, the men generally build here and there little huts with roofs made of timber covered with earth, and the sides and ends constructed of anything they can get a hold of, from sod to doors off farmhouses and other buildings.

Sometimes, these parapets are loop-holed so that the men can fire in a kneeling position from inside their huts. Even machine guns are placed inside these huts, to enable the men to fire through holes in the front wall, which is also the parapet. In such cases, the huts are continuous. Where this is not done, the huts are placed only here and there along the parapet, the men coming out of them to fire in a standing position over the top of the parapet in the intervals between the huts.

Where the position is prepared ahead of time, or where it is a second line hidden by a forest from the direct view of the enemy, a favorite type of combined breastwork and hut is a lean-to, made of logs with the inside facing to the rear. This lean-to is then covered with a thick bank of earth on the side toward the enemy and on top. Along the open part of the lean-to facing the rear is built a platform just wide enough for men to stand on, and high enough so that when they do so, they can comfortably fire from the top of the lean-to. When they are off this platform the lean-to is high enough to keep their heads from being seen. The men sleep inside the lean-to. In this way, breastwork and huts for shelter are combined. In some places, the thickness of earth put on these lean-tos is such that they are practically proof against anything but a direct hit by the very largest size high-explosive shells.

Going back to the French.

The men spend a busy second day in the position trying to complete their trenches. They realize that with the night there probably will be fighting. The first part of the night passes quietly. The men are in the firing trench. Their rifles are loaded and laid on the parapet. Those not designated to watch, snatch what sleep they can, sitting in the bottom of the trench with their backs to the front of it.

Now and then, a sentinel notices something suspicious moving, or hears a noise — and fires. The men spring to their feet. Then some nervous one fires a shot or two before he can be stopped by an officer. This starts a ripple of fire to his right and left, as other men fire, thinking the command has been given.

About nine o'clock, faint noises are heard from the direction of the German trenches. These grow nearer, and are followed by sounds which seem to indicate the use of picks and shovels. But as the ground in front is a field, there can be no certainty as to this. Again, a few nervous men fire and cause little bursts of fire in different sections of the line; these are promptly stopped by the officers. There is, however, no return fire.

Several officers and men are sent out from different parts of the trench to make a reconnaissance. They are gone what seems an interminable time.

H. J. R.

LOOKING DOWN ON A COMMUNICATING TRENCH

H. J. R.

RUSSIAN TRENCH FROM THE FRONT SHOWING LOOPHOLES

Finally, way to the front, in the dark, there is a flash from a rifle fired, followed by several cries. A little later, way to the right, there are the flashes of three shots in rapid succession, but no other noise of any kind. After another long wait, all but two of the reconnoiterers come back. They report that about two hundred and fifty to four hundred yards in front of the trenches, there is a line of German skirmishers, and they think back of them men are digging a trench.

Fire is opened all along the line, but bringing no reply, is stopped again. This is kept up at intervals until daylight, which reveals a new line of German trench, about four hundred yards to the front and including a farmhouse on the right.

About one hundred yards back of this new line of trench, a field glass shows a second line. All along the line of each, spades appear above the ground throwing earth to the front. No man, however, is in sight.

The French artillery promptly opens fire on the new trenches and on the group of brick farm buildings, the roofs of which soon are badly torn up, while jagged holes through the walls show where the projectiles have burst.

With the exception of the sentinels left here and there along the firing trench, the men return to the support chambers, as yet incomplete. They not only work to finish them but fix up holes in the

inside walls of the chambers, where they store away food and ammunition brought up during the night. They continue to work on the drainage in all parts of the trenches and enlarge the sanitary arrangements, which are at the end of narrow trenches built off to the right or left of the communicating trenches, and which are kept in good condition by frequent use of chloride of lime and constant change of position.

The activity of the Germans during the night revealed their evident intention of making a determined attack. The French, in consequence, prepared a second position about eight hundred yards back of the line of trenches originally dug by the supporting troops. This new position runs across open farming country and then into a thick wood full of underbrush. Across the open is built a line of trench similar to the ones in which the troops already are fighting.

A large French farm, consisting of several brick buildings around a courtyard and situated at a crossroads, is chosen as a good point for stubborn defense. Starting in front of it and running out to the left for about one hundred and fifty yards, an infantry *redoubt* is built. This merely consists of a breastwork roughly in the form of the arc of a circle with a double line of breastwork straight across from one end of the arc to the other. By this arrangement, the garrison of the redoubt can

fire in all directions. If the front parapet is taken, the remaining defenders are enabled to get behind the more forward one of the two rear parapets. If the rear parapet should be taken first, its remaining defenders can get on the front face of the interior parapet. Along the inside face of the front and of the rear parapet, but not of the middle one, there are traverses, or little earth projections, which prevent fire from a flank doing damage to more than a few men at a time. In the interior are several bomb-proofs for ammunition.

The roof of the farmhouse has been considerably smashed by German artillery fire, but the lower walls are still intact, and the windows and doors are filled up with sacks of earth and broken brick, leaving loop-holes through which the men fire. Loop-holes are cut through the brick walls at the proper height for a man standing to fire through. A hole is cut through the wall next to the redoubt, so that an entrance may be had to the redoubt from the farmhouse, or *vice versa*. All around the redoubt and the farmhouse is built a barbed wire entanglement.

The woods to the left are in rather low, marshy ground. When they are reached, the trench is changed to breastwork on the lean-to type. Back of the line of breastwork in the woods is built a second line of breastwork, but only at intervals, each piece being twenty to thirty yards long; this

second line is for the supports. Long branches of trees are nailed horizontally from one tree to another leading from each support breastwork to that part of the breastwork in front of which the men of that support are supposed to reinforce in case of an attack at night. By keeping one hand on these, they can run quickly from the support breastwork to their proper positions in the firing line.

Several hours before sunset, the German artillery starts a heavy bombardment of the French trenches. Only the sentinels are in the firing trench, the rest of the men being in the support chambers. A good many shells fall just short of the trench, or just over it. While sending up clouds of smoke and some dirt, a portion of which sometimes falls in the trench, these bursts do no other damage.

A shell from one of the big mortars bursts right on the edge of the trench. It kills a sentinel nearby and knocks down about twenty feet of the front face of the trench, filling up the trench and leaving a more or less funnel-shaped hole, about fifteen feet across and eight feet deep. In two instances, high-explosive shells from field guns strike just above the roof of the support chambers, making cylindrical holes about three feet in diameter and two feet deep. The men underneath are startled by the explosion. They jump to their feet at the first shock of it, but are in no way injured.

The artillery fire continues until well after dark.

Before it has entirely ceased, fearing an attack at any instant, the men are hurried up to the firing trench, which results in some loss. As soon as the men reach the firing trench, they squat down in the bottom of it, and so are reasonably safe except from the bigger high-explosive projectiles. One of these lands directly in the trench, killing seven men and wounding five others. Three of these men are wholly covered by the earth which is displaced by the explosion, and three other men are partially so.

The artillery fire ceases. As soon as the men's ears have become accustomed to the shock caused by the bursting of the projectiles, some of them imagine they hear a movement to their front. One is sure he hears the tick of wire falling, as if the barbed wire entanglement were being cut. He tells his officer what he has heard and fires a shot in the direction of the noise. Several others in different parts of the line do likewise. This is followed by the decided noise of men moving in the darkness in front of the trench. Some of the men commence firing just before, and others just at the moment, the officers give the command.

As the firing swells to a roar, there is a shout from out of the darkness in front of the trench, and large numbers of Germans swarm to the edge of the trench. All have their bayonets fixed. All are yelling. Here and there officers can be distinguished by their naked swords. To the right of

the line, the rifle fire and the fire of machine guns prevent their reaching the edge of the trench. Many killed or wounded fall where they are; others lie down and commence to fire. A few run back into the darkness. On the left, however, they come with such a rush that some manage to jump down into the trench. These are promptly bayoneted or shot. A machine gun, farther to the left, is turned on those still on the parapet, and the men who do not drop, run back into the darkness.

The men in the trench keep firing continuously to the front, although they see nothing but a line of flashes quite near the spot where many of the attackers have thrown themselves down to fire.

Soon the yelling again is resumed and from out of the darkness the mass of gray figures with shining bayonets again rushes forward on to the trench. On the right, once more, they are stopped by the fire before they can reach the trench; while on the left, for a length of about ten yards, they jump down into the trench. Amid yelling, cursing, groans, the sound of firearms and the occasional clash of steel, the French are gradually being forced back along the trench in each direction, while more and more of the Germans jump into it.

Suddenly, out of the darkness, just to the rear of the part of the trench occupied by the Germans, come cries of "*Vive la France! Sal Bosche!*" and the French supports run up to the edge of the

trench and fire down in it upon the surprised Germans. Then a machine gun brought up is turned on those Germans above who are trying to get down in the trench. They retire in the darkness, as before, and again nothing more can be seen than a line of flashes a short way to the front of the trench. The Germans caught in the trench, not killed or wounded, soon drop their rifles and throw up their hands. They are taken off to the rear under guard, through a communicating trench.

In a few minutes, but this time with more of an interval than the preceding time, the yells again are heard. Gray figures again appear suddenly out of the darkness and throw themselves toward the trench. On the right, they get a little farther than they did before; but the machine gun again causes a number to fall, others to throw themselves on the ground and fire, and the remainder to run back into the darkness. On the left this time, thanks to the machine gun which has been brought up, they do not get into the trench, but are stopped, as on the right. Gradually, the line of flashes becomes more and more distant and the firing also grows less. Finally, except for occasional shots, there is complete silence.

During the remainder of the night, the French troops carry their own wounded to the rear and the German wounded away from the front of the French trenches. They also repair the damage

done to their trenches in different places by the shell fire which preceded the attack.

At daybreak they discover that opposite their left, the Germans, in spite of their repulses during the night, have succeeded in digging a new trench only one hundred and fifty yards distant. The men, except the sentinels, are allowed to go to the support chambers to rest. By watching where the shovels, which are throwing out the dirt, appear above the field, the French learn that the Germans are digging a second line about a hundred yards to the rear of the new front line on the left. It is decided to capture this new trench, which stands out conspicuously in front of the German main line.

Back out of sight of the Germans, extra batteries are brought up and put into position. About noon, all the batteries open fire on the new piece of trench, using high-explosive shells. The German batteries reply and fire on the French trenches. The French batteries, nevertheless, keep their fire concentrated on this one piece of trench. Occasionally, when some of the bigger French shells explode in it, pieces of wood and other objects fly up in the air and then fall back to earth again.

Late in the afternoon, the infantry, brought up from the support trench, fills the communicating trenches running from the French first line to their second line. The men sit at the bottom of these trenches awaiting orders to attack, and wonder

which, if any, of the German shells that they hear exploding around them, and which occasionally send dirt down over them, are going to land among them.

When night time comes, the artillery fire again ceases, and the infantry, after passing through the remaining parts of the communicating trenches into the firing trench, climbs over its front face and crawls along the ground toward the front.

Suddenly, there are several rifle shots coming from in front of them, and almost immediately afterward the Germans fire star shells into the air over the French position. These light up the scene and show the French to be coming up over the edge of the trench and crawling along the ground. Then rifle and machine gun fire commence all along the main German positions and along the French trenches to the right and left of where the attack is being made. All the men and officers of the attacking party jump to their feet, and with cries of "*Vive la France!*" rush forward the hundred and fifty yards necessary to reach the nearest German trench. A number of men pitch forward on their faces. Some do not move; others roll around a little, and then are quiet; while still others get up in a stumbling, hesitating manner and grope their way back to the French trench. The mass, however, sweeps on, and is soon in the German trench, or what is left of it. As the first Frenchmen reach the edge, the remaining Germans left

alive in the trench fire at them. Some run back through the communicating trench, while others remain and resist, only to be killed or, in a few cases, captured.

What is left of the trench is in utmost confusion. The fire of the artillery has beaten it out of shape. In some places what was the trench has been filled in, while nearby is a big hole made by a high-explosive projectile which filled in the trench with the earth it displaced when it exploded. Pieces of the wooden revetment are scattered around everywhere, intermingled with helmets, rifles, and other articles of equipment and clothing. Here and there lie human bodies, some terribly mangled. Sitting on the ground, leaning against a bank of earth, is an unarmed, apparently unharmed, German who stares dumbly around. So shocked is he by the concussion caused by the exploding shells that, for the time being, he does not know where he is, what he is doing, or what has happened to him.

The attacking party stays only the moments necessary to kill or capture the few survivors in the trench, and then rushes up to attack the next new trench, about one hundred yards farther back. In spite of the fire and some losses, the men succeed in getting into the second trench and in killing some of its defenders. Just as they believe they have captured it, a German machine gun, at one end, opens fire right down the trench. Many of the

French are either killed or wounded. Immediately, the remainder jump out, and, pursued by the fire of the machine gun, run back to throw themselves into the first trench recently captured. Here they are comparatively safe, for as soon as they took this trench, other infantry and engineer soldiers occupied it and started to prepare it for defense against counter-attacks by the Germans.

A few minutes later there is a rush of German infantry from the trench in which the machine gun had enfiladed the French. The reënforcements and the engineer soldiers with two machine guns, which they brought up, fire so effectively that the rush is stopped about twenty yards from the trench. After this, the fire gradually dies down on all sides.

During the rest of the night the French work steadily and persistently in turning the captured trench into one facing the Germans and connecting it by means of communicating trenches with their original first-line trench. To make their new position more secure, they also dig a trench about half way between it and their old trench. Along this part of the line, the German and French trenches are now only about a hundred yards apart.

While the men in these trenches must be more on the alert for infantry attacks, at the same time they are safer than they were in their old trenches, for the reason that where the trenches are so close to each other, the artillery of neither side dares fire

for fear of hitting the trenches of its own infantry.

Morning shows a German trench just in front to be connected with their main trench by a long diagonal trench going to the rear. From this diagonal trench the Germans are digging one which, if continued, would tend to flank the right of the new position just captured by the French; also opposite the center of the main French line, the Germans have started a *sap* to the front. A sap is nothing more than a ditch deep enough to hide a man, and dug diagonally in the direction of the enemy, the dirt taken out being thrown to the side toward the enemy, so as to give additional protection. It is always dug diagonally toward the enemy and not directly toward him, as, if this were done, the enemy could fire directly down it. The whole purpose of building saps, or *sapping*, as it is called, is to approach closer and closer to the enemy without suffering from his fire. When the sap has gone a certain distance, say diagonally to the right, it is then dug diagonally to the left, thus constantly gaining ground by zigzagging to the front, the dirt taken out always being thrown on the side nearest the enemy.

As a rule, a number of saps will be started at the same time from different parts of the same trench. When all have advanced a certain distance, they are connected by a line of trench more or less parallel to the original trench from which the sap was

started. These roughly parallel lines of trenches are called *parallels*. Their distance apart depends upon the distance from the enemy. The nearer the enemy is approached, the more often the parallels are dug; when within a few hundred yards of the enemy, they are dug every thirty or forty yards.

The French dig out several saps on their right, with the object of getting nearer to the farm, which makes a strong point in the German line and which undoubtedly will be very difficult to capture.

This starting to approach each other by sapping and digging parallels shows that each side has decided that the capture of the other's trenches by open infantry attacks is at too great a sacrifice of lives and has not sufficient prospect of success. They, therefore, have decided on the slower but much safer method of advance.

For several days and nights, both sides continue sapping and digging parallels. The French work closer and closer to the farmhouse, while the Germans work out more from the center of their line toward the center of the French line. This results in the French trenches bulging out to the right toward the farm and to the left toward the trench which they captured by assault from the Germans, while the part between of their original first-line trench is still the first-line trench. Some of the German trenches bulge out into this gap.

While the original first-line trenches were con-

tinuous for long stretches, this is not true of the trenches built since the sapping had commenced, due to various causes — such as, the desire to get as far forward as possible in a particular direction with the minimum amount of digging, or to the building of a trench as a protection against a flank attack. Some of the trenches are very short, while others are much longer, irregular in outline, and face in different directions.

Day and night the work goes on. Frequently attacks are made at night. Sometimes, these are attempts to capture a certain trench or piece of trench. In such cases, the attacking force crawls quietly out of its trench in the direction of the one it intends to attack, and when discovered, or at the barbed wire entanglement, rises to its feet and rushes on the trench. This always results in fierce little fights in which the bayonet inevitably is used. The defenders who remain in a trench long enough to resist with the bayonet are nearly always killed or badly wounded. If the attack succeeds, the trench sometimes is held, in which case the captors work feverishly to connect it with their own trenches and to blockade the communicating trenches leading to the enemy's trench. Sometimes the attackers get the trench, only to be driven out again. At other times the attack is on the head of a sap in the process of construction, in which case the object is generally to kill or drive out the workers

and to destroy as much as possible of the work done.

In all these attacks, hand grenades are used. A hand grenade is a metal receptacle filled with a high-explosive which has either a fuse so arranged that the shock in hitting the ground or any object causes the grenade to explode, or one which after being lit, as in striking a match, burns a number of seconds before exploding the grenade; in other words, it is simply a high-explosive shell which a man throws in the same way as a base-ball is thrown. Some forms of grenades are made so that they can be fired from an ordinary infantry rifle.

If attacks can be made before the enemy can build a barbed wire entanglement, or place obstructions of any kind in front of his trench, the attack has a much better chance of succeeding. If this entanglement has been made, it must be cut through before an attack can reach the enemy's trench.

All sorts of means have been tried to cut this wire from a distance — such as, hooks on the end of poles and other grappling devices, but most of these do not work very well. High-explosive shells or hand grenades frequently are used with considerable success. One of the best methods is for men to crawl out at night and quietly cut the wire with wire-cutters. This is very dangerous and often results in the death or wounding of the men who try it. Sometimes the men so wounded cannot get back and therefore lie several days between

the lines before they are rescued. This also occasionally happens to the men who are wounded in an attack which fails.

Hand grenades are a weapon of past wars which the Japanese resurrected in their war with the Russians. The grenadiers, who are now infantry like any other infantry, a few hundred years ago were the men who threw hand grenades into the ranks of the enemy — hence the name, grenadiers.

Another weapon considered obsolete, again revived, is the small mortar. These are little, short, thick, metal cylinders. In the breach end of the bore is placed a charge of powder, and on top of the powder a shell full of high-explosive which bursts when it strikes, or shortly after. These mortars are pointed almost straight up in the air when fired. Consequently, the shell comes down almost vertically, and if the aim is good, drops in the enemy's trench a hundred yards or so away. The advantage of these mortars is that they can be used where the trenches are so close together that the enemy's artillery cannot fire for fear of hitting his own trenches.

The Germans foresaw the use of these mortars and had especially-designed ones ready. The Allies have been making use of all the old ones, long considered relics, which could be found in the old fortresses. The Germans also have some sort of a machine for trench digging, which the Allied

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FRENCH SAPPERS AT WORK UNDERGROUND ON A MINE GALLERY

soldiers frequently hear at work, particularly at night.

In this trench warfare, the German sniper has proved, and still is proving, a great danger. Almost anything, from a shovel to a man's head sticking above a trench, immediately gets a hole through it. Sometimes these snipers find a position from which, unseen, they shoot into a certain part of a communicating trench. One day six men from the same company were wounded while going for water through a communicating trench. At another time, a sergeant having a grazed wound along the side of his head, told of being the only survivor of eight men who had been in his part of the trench, the other seven having been shot by the same sniper who had wounded him.

Going back once more to the Germans and French in their trenches.

The day finally arrives when the French troops on the right of their line have advanced so near the new German trenches, which the latter have built to the front of the fortified farmhouse, that the Germans without leaving their trenches can throw hand grenades into the French saps. This prevents any farther advance by sapping.

The time has come to mine — that is, to dig a tunnel from the French trench to the front until underneath the German trench, and then to blow up the enemy's trench. Just out of range of the

German grenades, a small trench parallel to the German trenches is dug out from the French sap. The part of this trench nearest the sap is dug very deep, and is covered with logs and earth up to the level of the ground. A number of engineer soldiers start in this covered portion of the trench to tunnel to the front and gradually downward at the same time. The rest of the trench, in which is the opening of the tunnel, is occupied by a number of infantry soldiers; they constitute a guard to keep the Germans from attacking and destroying the entrance to the tunnel should they suspect that one is being dug from this trench.

The tunnel is made about four feet high and wide enough for a man to work with a pick and shovel with some degree of comfort. While one or two men are thus employed, others carry out the dirt in baskets or bags, while still others put up wooden braces to keep the walls and roof of the tunnel in place. After the tunnel has reached a distance of about fifteen feet below the surface of the ground, it is continued at a level. When a short distance underneath and in front of the barbed wire entanglement and trenches of the enemy, the tunnel is made to branch to the right and left. Sometimes there are two branches, sometimes more, and they are smaller than the main tunnel. Only one man can dig at a time in each, and he is obliged almost to take a lying position. The main reason for this

is that as the German trench is approached, there is danger that the Germans might hear the noise made by the miner; the smaller the tunnel, the less noise and the quicker the tunnel moves forward.

It frequently happens that both sides are mining at the same time; occasionally the men of each side hear the work going on in a tunnel nearby. Sometimes, a man working in one tunnel finds that the earth in front of him gives way suddenly and he is in a tunnel built by his enemy.

Once mining has started, each side digs from its trenches to the front, what are called *listening galleries* — little individual trenches or little tunnels when men are posted to listen for the mining operations of the other side. Whenever the enemy is heard thus at work, an attempt is made to undermine his tunnel; that is, to place a charge of high-explosive below him and blow him and his tunnel up.

The branch tunnels are continued to the front for a short distance and then are made to turn to the right and left. Officers in charge are responsible for determining the exact positions of the tunnels; they must know how far below level they are, and what particular parts of the surface they are directly under.

When the small branch tunnels have almost reached the spot where it has been decided to place the explosive, the engineer soldiers instead of a pick or shovel use a long bar having a large gimlet

at the front end and a handle fixed at right angles to the bar at the other end. By turning this handle, the soldier works the bar into the earth in front of him, which enables him gradually to make a hole the size of the bar. When the hole is far enough along, a high-explosive called *melinite*, which comes in little packages, is shoved by the soldier to the end of the hole to the amount that the officers have calculated necessary to blow up the barbed wire entanglement and the trench above. The charges being ready, there remains only to arrange the means of firing them. The last package of melinite placed in each hole has a cap of fulminate of mercury to which electrical wires are fastened. These wires are run back through the tunnel to the trench from which the original tunnel started. It now is only necessary to complete the electric circuit to explode the mines underneath that section of the enemy's trench which is in front of the fortified farmhouse.

When everything is ready, it is almost dark. Back on the second line of trenches, where are the supports, the men of a battalion of infantry are preparing to move out. As soon as it is dark, they move up through the different communicating trenches to a point near where the explosion is to take place. When the word is given by the officer in command, the engineer officer in charge of the mines presses a plunger, thus completing the

electric circuit. Then there is a series of muffled roars, and along a part of the German trench four columns of smoke and earth shoot up into the air. Debris is scattered in all directions, some of the lighter pieces falling down upon the men of the battalion.

With the explosion, the leading men crawl out of the trench and to the front. Others quickly follow. Before they have gone far, star shells are fired from the German positions, which light up the scene and show the attacking infantry. They immediately jump to their feet, and yelling rush across the intervening space into the series of craters which before the explosion was the German trench. Finding no one alive to offer resistance, they rush out the far side and on to the brick farmhouse and the German trenches to the left of it.

Behind them a company of engineer soldiers has come carrying picks and shovels and the material needed to revet a trench. They enter the craters made by the explosion of the mines and immediately start to arrange a parapet along the edge of them toward the Germans. Others dig a communicating trench between the captured position and the French trench nearest to it.

But the farmhouse has proved too strong. The surviving attackers soon commence to come back into the new positions, singly and in twos and threes. The attack on the trench to the left of the

farmhouse succeeds, however, and men crowd over it. Hidden back of the brick farm is a small mountain gun in such a position that it can fire into the flank of troops capturing the trench to the left of the farmhouse. As the French swarm over the trench and up the other side, this gun is fired very quickly a number of times. The fire is reasonably accurate and comes as a complete surprise. This, coupled with a sharp rifle and machine gun fire in front of them, is too much. Some of the men run back immediately, others fire a few shots and then run. Before long, those not killed or wounded are back behind the breastwork which is being made by the engineer soldiers in the new position.

The German trench which was blown up was only part of a line of trench, the rest of the trench still being in German hands. The French engineer soldiers, while busily engaged constructing the breastwork in the front part of the craters, are at the same time obliged to block up the two ends of the German trench to the right and left. This is done quickly. When the Germans, recovering from the shock of the explosion, come down their trench on each side of the part occupied by the French, they are met with a heavy rifle and hand grenade fire, which drives them back behind the nearest traverses. They, therefore, fill in a portion of their trench so that they will have a breastwork

between them and the part of the trench occupied by the French.

As soon as the new position is well organized — that is, as soon as all the breastworks and trenches necessary for its defense have been completed — a tunnel is started with the object of mining the brick farm to blow it up and ultimately capture that position.

In this manner the two armies have become entrenched over the immense front which they now occupy from the British Channel to Alsace. This is the method they have adopted to push their trenches forward, and trench warfare is now being carried on in this way. Everywhere it may be roughly divided into four periods:

The first is one in which the two forces advance toward each other and finally entrench. This may be because one side has assumed the defensive, and the other side in attempting to attack has found an open assault to be impossible; or each side may be trying to attack the other, but finding the fire too strong, entrenches.

The second period is one in which they try to capture one another's trench by attacks across the open space between, while advancing their own trenches by moving forward at night and entrenching their new position.

The third period is one in which they advance on each other, primarily by sapping and digging

parallels. In this period, attacks across the open space between the trenches also are attempted.

The fourth period is one in which the trenches have been pushed so near to each other that they no longer can be advanced by sapping, because the hand grenades and bombs can be thrown into the saps without the enemy having to leave his own trench. They advance, therefore, by tunneling underneath the ground, blowing each other's trenches up and occupying the craters caused by the explosions.

Often, the two lines of trench run right through a village. In this case, due to the protection furnished by the houses, the difficulty of capturing them, and the greater damage done when they are mined and blown up, the fighting is of much more vicious nature. Sometimes, the trenches are just outside and around a large town, such as Arras. Then defensive positions are prepared within the towns themselves, in which case the towns not only suffer from the fighting which takes place outside but, should the enemy once gain entry, they inevitably are badly damaged by the fighting which takes place within them.

When a soldier is in one of the support chambers, he is not at all badly off. While he, of course, keeps his clothes on all the time, he is well supplied with food and has brasiers in which he burns coal or coke to keep warm. His greatest enemy is the

mud. Had the weather during the winter gone below freezing point and remained there, he would have been much better off. However, while there have been some freezing spells, lasting a number of days, most of the time the temperature has gone from above freezing to just below it and back again. This has been accompanied by considerable rain, so that the bottom of all the trenches have been filled much of the time with half-frozen mud, which, each time the temperature rises, turns into liquid mud. This has resulted in a great many cases of frozen, or partially frozen, feet.

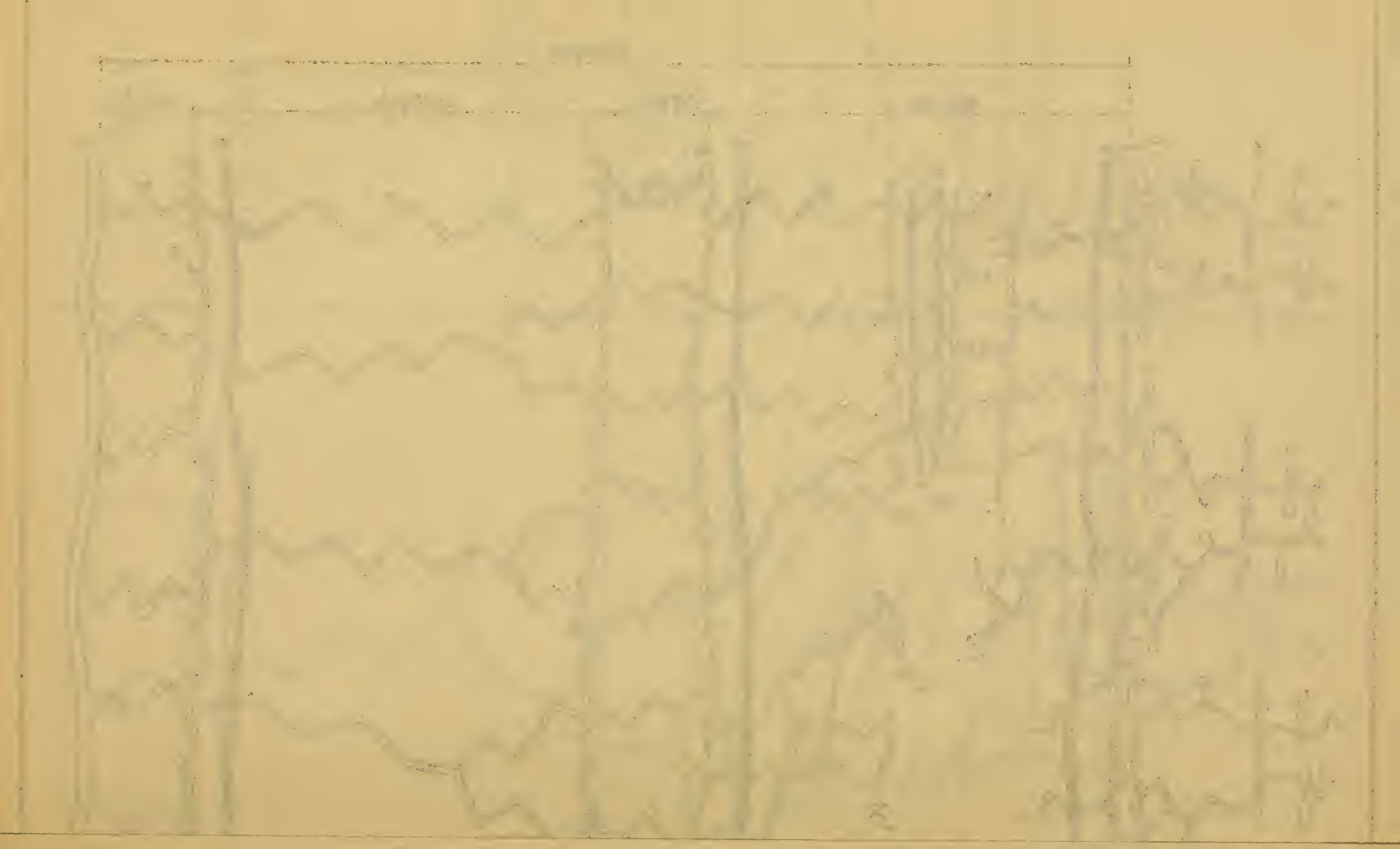
In addition to the physical strain, there is frequently great mental strain, due to the necessity of sitting inactive hours at a time under artillery fire, not knowing at what moment a shell may kill or wound the individual concerned; the men frequently also have too much time to reflect on the difficulties of making an attack on the enemy's trenches.

While in no cases has the morale of the troops broken down, every effort is made to have the men remain on duty in the trenches only a certain length of time and then to take them back out of danger where for a few days they can be rested physically and mentally, get cleaned up, and have all the sleep they want. By this method of reliefs, the men are kept in good physical condition, and when they return to the trenches have plenty of vim and enthusiasm to make the necessary attacks.

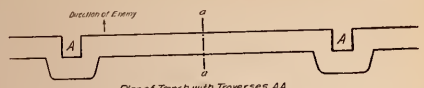
Trench warfare thus far has produced no really great developments. All that may be said is that now it is being adopted on a much larger scale, and that the explosives used both in projectiles and in ammunition are much more powerful than ever before.

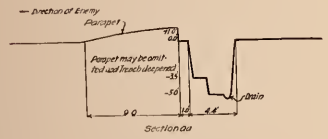
Advancing by saps and parallels, mining under the enemy's position, and the use of grenades all date back to the siege warfare carried on everywhere in Europe in the 18th century. This period of siege warfare was followed by one in which armies fought in the open field and, as a rule, without protection of any kind other than that given by villages or farms which happened to be on their battle line.

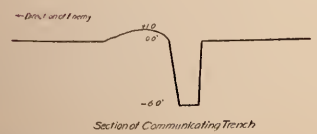
As modern firearms became more powerful, the necessity was seen of finding some protection for the soldiers. In the American Civil War, trenches and breastworks were used to a very great extent, and more and more so as the war progressed. Toward the close of the war, almost invariably, the infantry of both sides started building breastworks or trenches as soon as they took up a position. However, very little attention was paid in Europe to the American Civil War. The first war which attracted considerable attention among the European nations to the subject of field-entrenching was the Russo-Turkish War of 1877, in which Osman-Pascha defended Plevna for some time with



TYPES OF FIRING AND COMMUNICATING TRENCHES







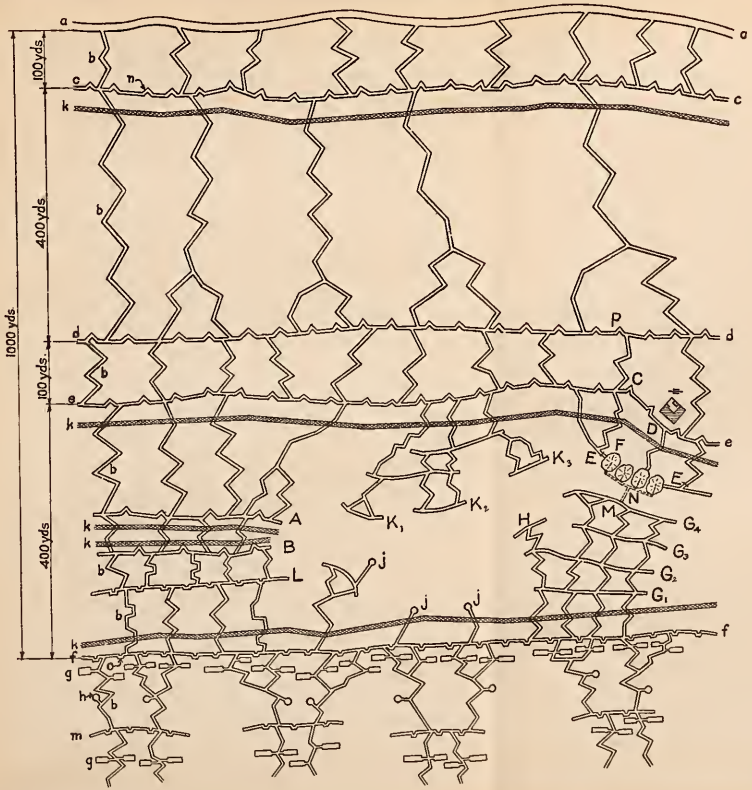


DIAGRAM OF A SECTION OF THE

FRANCO-GERMAN LINE OF TRENCHES

SHOWING

HOW THE ARMIES HAVE BECOME ENTRENCHED

To Accompany

"WHY PREPAREDNESS"

By

CAPTAIN HENRY J. REILLY

EXPLANATION

aa Sunken road occupied by German troops during the first day's fight; later converted into a reserve trench by digging bomb-proof huts in the front face.

b Communicating trenches.

cc Trenches dug by Germans the first night, with redans, **n**, or sharp loops to rear, to avoid enfilading fire. The German trenches also had overhead cover at intervals for protection from artillery fire.

dd } Two lines of trenches built by the Germans
ee } the second night; brick farmhouse at right was included as part of the scheme of defense.

ff Trenches built by the French the first night, with traverses, **o**, to avoid enfilading fire.

g Underground, bomb-proof chambers, in which men rest and sleep.

b Latrine.

j Listening posts.

k Barbed wire entanglements.

m Trenches of French supports.

n Redan.

o Traverse.

A } Trenches built by the Germans the third
B } night. **B** was captured later by French assault; same assault reached **A** but was driven back by a machine gun firing down that trench. **B**, originally a German trench, was connected after occupation by French with the French line by means of communicating trenches. **L** is a parallel built by the French to strengthen their hold on **B**. The Germans in **A** and the French in **B** put barbed wire entanglements in front of them.

C Where the French captured German trenches, but were driven out by the flanking fire of a mountain gun hidden behind the brick farmhouse, and by rifle and machine gun fire from **P**.

D German trenches in front of the brick farmhouse where the French attack failed because of the strength of the brick farmhouse.

EE Section of German trench occupied by the French after the explosion of the mines.

F Craters made by the explosion of French mines, immediately occupied by the French and connected with trench **G4** by saps.

G_1G_2 French parallels built in the advance on the **G_3G_4** brick farm.

H French trench built to guard parallels from attacks by Germans from **K_2**.

K_1K_2 German parallels connected by saps made in **K_1** the advance on the French trenches.

L Parallel built by the French to strengthen their hold on **B**.

M Entrance to French mine tunnel.

N French mine tunnel.

P German position from which rifle and machine gun fire was directed at the French who had penetrated to **C**.

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no other than the field fortifications built by his army. In the Russo-Japanese War of 1904–1905, and in the Balkan Wars of 1912–1913, trenches were used extensively.

When the present war broke out, it was found that the German army knew more about field-entrenching and had made much greater preparations for it than had the armies of the Allies. The Allies soon learned from their enemy, however, especially the French. German trenches captured were carefully studied and engineer officers and soldiers were distributed among the infantry as instructors. The French infantry soon learned the lessons so taught, particularly those who had been under fire. What the French soldiers now think about entrenching is shown by the fact that thousands have thrown away the small entrenching tools issued to them as part of their equipment, the weight of which they had frequently grumbled about during peace manœuvres, and instead carry around with them full-sized picks and shovels, naturally much heavier.

CHAPTER XXV

THE PSYCHOLOGY OF BATTLE

April, 1915.

AS the infantry dismount from their motor-buses, just out of range of the artillery — in other words, on the edge of the battlefield — of what are the men thinking? What sensations do they undergo? These are questions frequently asked, not only by those who have not been in battle, but by those who have undergone the ordeal and are anxious to compare their impressions and feelings with those of others who have had similar experiences.

Most of the men have thought about battle on the way to the front; now they have reached the point where they are about to enter it.

The sight of the wounded in a nearby hospital; the noise of the firing to their front; the burst of the artillery projectiles which land a short distance in front of them — all these are indications that the hour finally has arrived when they are to be subjected to probably the hardest test that human beings can undergo.

The men may be divided primarily into two classes: those who have never been under fire, and those who have. Of the ones who have not, a few are boastful, and some of these probably

will show a lack of nerve before the test is over; others will sober down into good soldiers. Many are afraid they are going to be afraid; many of these will be, others not. A few feel exhilarated and look forward to the combat. Of those who have been under fire, some are afraid and know that they will be afraid throughout, but they will do as they have done before, be governed by a sense of loyalty and do their duty as well as the more intrepid fellows. Some are frightened as they have been every other time before entering battle, but know that once in it they will forget their fright. A few are careless and are not concerned one way or the other; they have formed the habit of accepting things as they come. A few have found in combat an excitement to be found nowhere else, and look forward to experiencing that excitement again. Many pray — some as a result of habit extending through years, others for the first time in a long period; some want to pray, but, having neglected prayer for a good many years, are ashamed to do so now that they are about to enter danger. Some talk rather quickly, but on the whole most are silent. A few are morose and very downcast. Many show by their expression that they have faith in their ability to do their duty, no matter what happens.

While the officers and noncommissioned officers are human beings and subject to the same feelings

as their men, there are certain differences if they are men of long military training. They look upon combat as a problem to be worked out; as a business to be brought to a satisfactory conclusion, with the minimum expenditure and the maximum results. They have many responsibilities and many things to think of. The habit of discipline brought on by work and study over a period of years enables them to concentrate their minds on the work ahead to such an extent that soon they forget themselves completely. In addition, they have bred a determination which makes them work to their extreme limit, physically and mentally, to overcome every obstacle and shove the combat through to a successful termination.

Artillery fire always has had a considerable demoralizing effect. The greener the troops, the greater the effect. However, until recently, the fire of artillery was not really deadly enough to affect sufficiently the morale of veteran troops. The efficacy of the artillery in the present war has increased the moral effect, while the material effect is great enough to make even veteran troops cordially dislike to be under its fire. They dislike most the high-explosive projectiles, and the larger the projectile, the more they dislike it.

This dislike is due to several causes: the great range of artillery which compels troops to advance over great distances under shell fire before they

can reach rifle range; the ability which this great range gives to surprise troops on roads, or in districts where they do not know that they are even within range until suddenly fired upon; the power of the heavier projectiles to tear down and destroy all cover which they may hit, gives rise to a feeling of utter helplessness; but doubtless the greatest cause is the physical shock to the nervous system brought on by the concussion of the exploding shell, with its vivid white flash, even though a man be out of range of the fragments. There are a number of instances where men have become temporarily insane, due to their inability to withstand this fire. Continual exposure to these shocks tends to wear out a man's resistance, to break down his nervous system, and to affect seriously his moral strength.

Aeroplane bombs are not particularly dreaded, as the men can see the aeroplanes and then know that, unless directly underneath them, there is no danger.

Trench warfare is particularly trying on the morale of the men. They are always in considerable danger, and yet frequently have long periods with nothing to do but think about what they see. When their trenches are being shelled by a few guns, as is often the case when no heavy combat is taking place, they can tell by the sound whether the shells are going to land in their vicinity

or not. Bombs sent up by the enemy trench mortars frequently are seen coming. When men are killed or wounded, their bodies inevitably remain for a time right in the trench, alongside of the living, instead of being left behind by the advancing or retiring line, as is the case when fighting in the open. An isolated incident of a man being shot through the head is never a pleasant sight.

During the attacks, the men see the efficacy of machine guns and the difficulty of getting across the short distance between their trenches and the enemy's trenches. After attacks, they see the dead, and in many cases the wounded, left lying in this space. It has come to be pretty well understood that all this works so much on the morale of the men that if they have been in the front-line trench for some time, when they are ordered to make an attack they are as good as beaten before the attack begins, for in their own minds they consider it hopeless. They will make the attack from a sense of duty, but without the determination and vim necessary to carry it through successfully. The same men, however, if taken to the rear and given plenty of rest and good food for a few days, will come back and make an attack which will prove quite successful.

When the men have some cover to get behind, shrapnel fire is a relief after high-explosive fire. Infantry fire is a decided relief from artillery fire of

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SERBIAN INFANTRY ADVANCING ACROSS AN OPEN FIELD UNDER ARTILLERY FIRE

any kind. While an infantry bullet can do enough damage when it hits a human being, it does not harm his nervous system by coming very close without hitting. There is no doubt that infantry fire alone exhilarates and excites many men.

Bayonet fighting takes place with great frequency. Every time an assault is made on a trench, the bayonet is used. These hand-to-hand fights are particularly vicious. They never last long, but while they do, mercy is seldom shown. For this reason few bayonet wounds are treated in hospitals. Of those wounded by bayonets, few get farther than a field ambulance, so serious are the wounds.

A case is known where, after one of these vicious hand-to-hand fights in which most of those who did not escape without any mark were killed, three men wounded by bayonets were brought into the same field ambulance. One was a German, stabbed through the chest, who died in about an hour; the other, a Highland Scotchman, who had his leg ripped open from his knee nearly to his hip; and the third an Irishman, who had six stab wounds, two in his arms and four in his legs.

The morale of the wounded, as they come to the rear from the battle line, is frequently a good indication of what is happening. When there are many men who have to be put face downward on the stretchers, because their wounds are in the back,

no questions need be asked. When they crowd around ambulances and try to get in, regardless of their wounds, things are not going very well on the firing line.

One of the most difficult duties in every field ambulance is for the surgeon to separate the sheep from the goats; that is, to pick out from those who claim to be sick or to have minor ailments, those who really should be in a hospital and those who are merely malingerers. The hotter the fighting and the worse troops are getting beaten, the greater the number of malingerers. During the fighting in October and November, when the British were so hard pressed, every day or two a little crowd of men would be gathered together in the field ambulances and sent back to the front, the surgeon having found their complaints not to be such as to warrant their being sent farther to the rear.

As in all wars, there are in the present one instances of men who deliberately mutilate themselves in order to escape from the firing line. A few of these cases have been found among the white troops, but a much larger number of cases among the British Indian troops; in fact, gun shot wounds in the left hand became such a common spectacle among the Indian wounded that it occasioned considerable remark.

No better object lesson of the value of morale

and the terrible strain to which the troops are subjected, particularly when on the defensive and just holding their own, could have been had than that experienced by those who observed the faces of the British and Indian troops when going into action, during the great turning movement in October and November, and the faces of the men who were still alive and unwounded after days of being constantly attacked, after having been shoved back literally foot by foot by the Germans and having suffered heavy losses in killed, wounded, and prisoners. They finally succeeded in keeping the Germans from breaking through, but at a cost and under a strain which no green troops could have stood more than a day, much less for a period of weeks.

The Indian troops, while perfectly willing to take part in hand-to-hand fighting or to subject themselves to infantry fire, in many cases in the beginning found the artillery fire more than they could stand, with the consequence that in spite of the splendid example set them by their white officers, many bolted from the firing line. Their Oriental fatalism did not stand the strain of sitting, expecting death at any moment and seeing it all around while unable to make reply, in the way in which the white man's sense of duty withstood it. In moral courage, the white man, in this war, has shown himself to be far superior to those Orientals

who, up to the present, have participated in it.

While the physical demands made on a man in battle now are no greater than they ever have been before, and while the danger to the individual is probably, on the whole, no greater, the mental strain and the strain to which men's nervous systems are subjected, are far greater than ever before. Napoleon said the morale was to the physical as three is to one. Probably, if he lived to-day, he would vastly increase the ratio of the value of the morale, for more than ever is it necessary that everything possible be done to start troops into action with a good morale and to keep that morale up.

As the war progresses, the need of strengthening the morale of troops is being felt more and more. The British have established back of their lines a number of hospitals for the care of those who have suffered a moral and nervous breakdown. In reality, these hospitals are rest cures.

Although the British regiments went to war without bands, the government is now contemplating sending bands to the front, because of the great beneficial effect which music has on soldiers under adverse conditions. The British regiments do not carry their colors in the field. The French do. There is no doubt that the possession of these colors by a regiment, with the consequent necessity of preventing the enemy from capturing them and

the shame felt when they are lost, considerably adds to the morale of the troops.

The nature of men has not changed. The instinct of self-preservation still looms large; it must be so overcome by discipline that sudden death, wounds, or nervous breakdown cannot bring it to the surface. This has always been known to trained soldiers, and the present war but accentuates the fact.

CHAPTER XXVI

HOW THE WOUNDED ARE BROUGHT IN FROM THE BATTLEFIELD

April, 1915.

IT is morning and an almost complete silence reigns along the front, as the men of the two armies in their trenches, not more than a few hundred yards apart, try to snatch a little sleep after a night full of fighting.

The men in the British trenches hear a report followed by a whistling noise, then more reports and more whistling noises. They strain their ears to find out the direction this whistling noise is moving, because practice has enabled them to tell approximately whether projectiles are going to explode well beyond, to the right, or to the left of them.

This time, those of a certain section know that the shells are coming toward them. They crouch lower in the shelters they have dug out in the front face of their trench. Now follows a series of loud explosions, some just in front of the trench, some just in rear of it, but one right on the front edge of it. The latter sends up a cloud of dirt and breaks down the front face of the trench, burying in the dirt the men who are crouching under it, while fragments flying to the right and left kill and wound many. Men from each side come up with their

spades and try to dig out those who have been buried. They succeed and get out four men, each badly shaken and bruised and almost suffocated.

The hospital corps men give the wounded first-aid treatment. Many have broken bones, and bodies badly torn by pieces of shell. With the help of some infantry soldiers, they are carried back, through the communicating trench to the support trench.

In the early stages of the war, surgeons were kept in the trenches to take care of the wounded immediately they were hit. However, so many of these surgeons were killed or wounded, that it was decided to send them no farther to the front than the dressing stations.

The enemy's artillery fire having started up again and continuing in earnest, the wounded can be moved no farther; in fact, they are fortunate to have been taken that far, as frequently the fire is so great, they cannot be moved from the place where they fell when struck. Here, during the remainder of the long day, these men lie. Some, fortunately, are unconscious, but those conscious, as the first numbness, which generally succeeds any bad wound, wears off, suffer terribly.

From time to time, as the fire slackens, other wounded are brought in to join them. Those men not so badly hurt who are able to walk or drag themselves along, drift back continuously from

the firing trench. Some of these *walking cases*, as they are called, prefer to risk the journey back through the communicating trench, getting to the dressing station as best they can, rather than wait until night comes, and with it relief. It is surprising with what bad wounds men can manage to move along without help, or with very little help. How painful the effort is, however, is shown by the way in which they always very largely over-estimate the distance they have come.

Once it is really dark, the stretcher-bearers arrive from the dressing stations, and with the help of such soldiers as can be spared, if any can be spared, carry those who cannot walk, and help the others back the half or three-fourths of a mile to the dressing station. These stations are usually near the outer limit of effective infantry fire.

If the night is a calm one and there is not much firing, the wounded are lifted out of the trenches and taken straight back across the country. If the firing is too heavy for this, the trip must be made back through the narrow zigzagging communicating trenches, a much greater distance.

Arrived at the dressing station, the wounded are carried, or helped in, through the gateway of an apparently deserted French farm, consisting of a house, two barns, a stable, and a number of smaller buildings, all built around a rectangular court-yard and all joined directly to each other or by

high brick walls. The quick opening and closing of the door shows that the farm is not deserted, and that there is a light in one of the rooms. As anything on a modern battlefield is in danger of being struck, the greatest precautions are taken to insure concealment. Dressing stations, field ambulances, ambulances, doctors and stretcher-bearers are continually in danger of being hit, and frequently are, even though the enemy never may fire on them directly. There are two reasons for this: one, modern projectiles are so powerful they frequently go way beyond the object aimed at, and hit something that those who fired cannot even see; and the other, artillery and troops being scattered over a battlefield of great depth, the enemy's artillery, in its endeavor to hit them, must cover considerable space with projectiles. Because of the great range, the artillery officers do not know, and have no means of ascertaining, what is in the space being fired upon. Firing, however, cannot be suspended because of danger of hitting some person or object belonging to the medical service.

Several sergeants of the hospital corps come out of the dressing station to receive the wounded. They have those most seriously hurt taken in the main room of the farm — a low, fair-sized room with a stove at one end, which while throwing out heat is at the same time giving out considerable smoke. All the windows are closed and covered,

so that not the least bit of light may escape. On the floor, on stretchers or on straw, and covered with blankets, lie the more seriously wounded. The only light is that given out by a number of lanterns, by the light of which the surgeons make such dressings as are necessary. They reduce fractures, and make as secure as possible the more dangerous wounds. Experience has taught them that the less a wound is interfered with until the patient arrives in a hospital equipped with every convenience for operating, the better the chance of the patient to survive, and in a case of lesser wounds, the better the chance of recovery without permanent injury.

The lesser wounded, after having been looked after, are taken to the barns and made as comfortable and as warm as possible in the immense piles of straw which fill them. All who are able to take it, are given hot broth. While the wounded are being attended to, little cards telling the nature of their wound or wounds are being filled out and prominently affixed to some part of their clothing.

About midnight, if the sound of the firing is not too great, the horse ambulances can be heard approaching. They are pulled up close to the dressing station, on the side away from the enemy, so as to get as much protection as possible.

Sometimes, when the firing is severe, the ambulances cannot come closer than within a half mile

of the dressing station. Then the wounded either must walk or be carried by hand from the dressing station to the ambulances. The most severely wounded are picked up first and put into the first ambulance, which is then sent off to the field ambulance. If there are a great many wounded, the less serious cases have to wait until the ambulances make a second or third trip. Often wounded arrive at the dressing station just before dawn, too late for the ambulances to make another trip, and are obliged to remain until the following midnight before they can be moved.

Some of the severely wounded die in the dressing stations. They are buried at night, in the little cemeteries formed on all the battlefields near the dressing stations. Here also are interred those killed in action.

The trip back to the field ambulances, established on the edge of the artillery zone, is, at best, a painful one. The ambulances must travel without lights and over roads frequently full of holes made by exploding shells, some big enough to overturn an ambulance should a wheel drop into them.

The roads often are shelled by the enemy, as he knows that troops, ammunition, and supplies probably reach the firing line over them. Therefore, at any time, the ambulances may be under shell fire without the officers of the enemy's artillery having the slightest idea that their projectiles are

endangering ambulances. When the roads are frozen, the horses move with difficulty, as they slide and frequently fall. In the dark, it is easy to make a mistake in the road, and such a mistake might lead to a dangerous position in front of one of their own batteries.

Finally the field ambulance is reached. The buildings used are those of the public school of a small village. There are two, two-story brick buildings connected by a covered passage-way. The roofs have been badly damaged and most of the windows smashed by the fighting which took place in the vicinity several weeks previous. In the front face of the second story of the first building a large round hole tells where a projectile has struck. The room inside is torn to pieces, while half the back wall has been blown out. The yard is muddy and littered with fragments of brick, while in one corner is a fire on which some hospital corps men are cooking coffee. The flames of this fire reveal, heaped up against the side of the building, a pile of rifles and infantry soldiers' field equipment taken from the wounded.

The ambulances back up to the front gate. Tired hospital corps men and the surgeons who went out with the ambulances help to carry the wounded into a large room on the ground floor of the first building. There is a stove which throws out an agreeable warmth; the holes in the windows

have been stuffed with rags of various kinds; and several lanterns on the floor afford a flickering light. Here the wounded are laid in rows if on stretchers, while the walking cases huddle around the stove.

In the next room, which in appearance is quite similar, the surgeons have arranged an operating table. All around the sides of the room are the open panniers holding all the instruments and kit necessary for a field ambulance. Here also are some lamps with reflectors. The wounded are brought in one by one, their wounds carefully examined and re-dressed. They are then carried by the hospital corps men to the second building, where they are laid in rows around the walls on straw which has been strewn thickly over the floor. Many of the wounded lie flat on their backs. Some stare straight up into the air, as if their gaze were fixed upon some object far above. Others move their heads from side to side and groan occasionally. A man in a corner who has a bayonet stab through his chest groans as he rolls from side to side; at times he tries to rest himself on his elbows. A hospital corps man holds up his head and does what he can to soothe him, but his sufferings seem only to increase. Soon his movements become weaker, his groans less audible until, with a little shudder, he stretches out —and is dead.

Two German prisoners lie next to each other. One, with a compound fracture in his right leg, is on his back, taking notice of everything in a dazed sort of a way, while he smokes a cigarette which his comrade has given him and lit for him. The other, with his left arm in a bloody sling, sits with his back to the wall and his legs spread far apart, while he watches with evident interest all that goes on about him. Although he is wondering what is to happen to him next, it can be easily seen that he has made up his mind to hide his anxiety.

On the whole, all the wounded are silent. They seem to care but little about anything until the hospital corps men start to move them, when their interest becomes intense, for movement of any kind to a badly wounded man is the one thing he dreads most of all.

If the wounded are arriving in such large numbers that the field ambulance becomes overcrowded, word is sent to the evacuation hospital, situated at the rail-head, and motor ambulances are started off immediately to bring in the wounded.

If this is not necessary, the motor ambulances arrive very early in the morning. The worst cases are taken charge of first. However, the ambulances are kept busy until all the wounded have been withdrawn. The roads being in better condition, the motor ambulances are able to move more quickly and with less jarring than horse

ambulances. Therefore, the trip of from three, and sometimes as much as eight or nine, miles to the evacuation hospital is less trying for the wounded than was the trip from the dressing station to the field ambulance.

As is the case with the dressing stations, some men reach the field ambulance only to die, some die en route. Near most field ambulances is found a little group of freshly-made graves where the neighboring peasants have planted sod, and as the spring approaches are planting flowers.

Once out of the field ambulance and started on his way to the clearing, or evacuation, hospital, the wounded man has left behind him the battle-field. The evacuation hospital to which he is taken by the motor-ambulance is the beginning of the line of communication and therefore does not belong to the field army. From the clearing hospital he is sent by rail to the base hospital, where every modern convenience awaits him.

The evacuation hospital is really not a hospital at all, but a big building, or groups of buildings, at the rail-head, where the wounded are collected, fed, kept warm, and given such surgical attention as is absolutely necessary until they can be sent on by train to the base hospital, well to the rear. The reason for this is that just back of the battle-field, out of the range of artillery, there must be points at which the wounded brought in from

the battlefield may be assembled. As the army advances or retires, these points must move with it. As an evacuation hospital must be ready to start at any time, it is impossible to establish a permanent hospital near the battle front and to give the wounded there the complete attention which can be given with safety only in a regular hospital far to rear.

When heavy fighting is going on, ambulances full of wounded arrive at the clearing hospital almost continuously, not only during the day but very often during a large part of the night. They enter a big courtyard and are unloaded by the hospital corps men, who place the stretchers containing the severely wounded in long rows on the ground, while the wounded able to walk are helped to chairs set along the walls.

The marked characteristic of most wounded men is listless indifference until approached by some one to move them; even those who are suffering so that they groan occasionally have the same air of listlessness.

As the severely wounded are almost completely covered by their blankets, only here and there can be seen a bandaged head, a bandaged arm, or a torn, bloody, muddy, empty sleeve or other piece of clothing hanging from the stretcher.

The walking cases, as the wounded are called who are not on stretchers, mostly have bandaged

H. J. R.

FRENCH LIGHTLY WOUNDED TAKING A HOSPITAL TRAIN TO BASE

H. J. R.

AUSTRO-HUNGARIAN WOUNDED BEING BROUGHT TO FIELD AMBULANCES BY WAGON

heads, arms, legs, hands, or feet. Of every branch of the service, and sometimes mixed with wounded German prisoners, they patiently, and for the most part silently, wait until given attention.

Immediately they are unloaded, noncommissioned officers of the hospital corps start taking their names and regiments. They then look at the little cards fastened to each soldier in the dressing station, which state the nature of his wound or wounds. By means of these cards, the wounded are sorted. The lying cases are carried to different wards, dependent upon the nature of their wound; the sitting cases and those walking or being helped, pass to a long room having chairs all around the sides. In the middle of this room are an operating table and a number of tables upon which are spread out all the surgical instruments and many atomizers filled with iodine. When put on the raw wounds the iodine frequently causes more pain than most of the instruments, but it saves greater suffering in the end, as it is a powerful antiseptic. It is squirted liberally over all the wounds.

Among the badly wounded, there are sometimes men who can be saved only by immediate operation. Nearly all the fair-sized French towns have permanent hospitals. If the clearing hospital is in a town of this character, the serious cases are sent immediately to the permanent hospital where

they are operated on. If not, a motor-ambulance is sent with the serious cases as rapidly as possible to the nearest permanent hospital.

There are always some beds in a clearing hospital, but when large numbers of cases are to be handled, most of the wounded must be content with straw mattresses placed on the floor. However, after their experiences in the cold, the wet, and the mud of the trenches, being in a warm room, with plenty of hot food, is a tremendous relief. While there are no bathing facilities and the wounded cannot be undressed, as they must be ready to be shipped whenever a hospital train may arrive, the dressing of all wounds is very carefully examined and adjusted.

After the men have recovered a little from the shock of being wounded, the trip in from the battlefield and the re-dressing of their wounds, many of the more slightly wounded wander about the courtyard, talking to each other and to the hospital corps men. They display the greatest interest in new arrivals, and crowd around, particularly when some wounded German prisoner is questioned by an officer. Some of these men are suffering a great deal and have that characteristic restless desire to move about, to do anything which for the moment may take their minds off their pain. Some are very cheerful, and may be seen contentedly eating large slices of bread and jam

with an uninjured hand, or if both arms and hands are injured, as is at times the case, being fed by another wounded comrade.

Aside from the arrival of the wounded, the courtyard is interesting, because the hospital corps men are going over the rifles and piles of equipment taken from the wounded soldiers. These rifles are carefully examined to be sure that they are unloaded. All the belts are searched for ammunition. This ammunition is sent back to the battlefield, while the equipment and rifles go to the ordnance depôts at the base to be put in proper shape for reissue.

In the courtyard the hospital corps men also are scrubbing the bloody stretchers, to some of which large lumps of gauze stick. They stand them up in rows against the sides of the building to dry out in the sun. When in a great rush, there is no time to wash the stretchers, so the dirty ones must be used just as they are.

Another point of interest consists in the end windows of one of the wards on the ground floor, through which may be seen the more seriously wounded German prisoners placed here. All helplessly flat on their backs, their faces pale, their bandages bloody, and their gray uniforms torn, bloody, and muddy — they never fail to cause comment on the part of their wounded enemies gazing at them through the windows.

The men's gaze is frequently also directed, when delirious cries are heard, to the small room where are placed the men shot through the head, who are unconscious and who cannot live much longer. One of these men, though unconscious, yelled almost continuously for three days and three nights: "Orderly, turn me over! Orderly, orderly, do you hear me, turn me over, d — n you, turn me over!" The ward orderly turned him again and again, but still he continued his demands. When the orderly was busy tending to the others, he would cry: "Turn me over, or I will yell!" and then he would scream, "Murder! Murder! Help! Help! Police! Murder!"

Sometimes during the day, but more often early in the morning, stretcher-bearers come out from the different wards carrying men who are completely covered by their blankets. They are the ones who have died as a consequence of their wounds, and are being taken to a little building off to one side, used as a mortuary. Here they are sewed up in their blankets. On the breast of each is fastened a piece of paper giving his name, rank, regiment, and religion. Then they are placed in wooden coffins on the top of which is fastened a cross with the same information. After this, they are buried in groups by a priest or minister of their own sect in a cemetery of that sect; or, if there be none, in one of the new military cemeteries which

have grown up on the outskirts of all towns where are clearing hospitals.

While during heavy fighting a clearing hospital is always a place of great activity, the maximum is reached when the hospital train arrives. At times one arrives every day, in which case wounded coming from the battlefield may be sent straight to the train without passing through the clearing hospital at all. At other times, the men may be obliged to wait two or three days in the clearing hospital, due often to the non-arrival of trains or to the fact that there are so many wounded that the train is filled up before all the wounded can be taken from the hospital.

The best of the hospital trains, of which the number is increasing continuously as the war goes on, are practically hospitals on wheels. In some trains, the wounded as soon as received are bathed immediately, given every attention which they could receive in a hospital, and put in comfortable beds. The average train, while not so well equipped, nevertheless ensures the wounded proper accommodation. It consists of ordinary passenger coaches for the wounded who can sit up, and of second- and third-class coaches, or of baggage cars, for the lying cases in which stanchions have been fixed so that the stretchers containing the men can be slung on them. Thus they avoid the dreaded changing of the wounded from one stretcher to another.

In the rush of the heavy fighting at the beginning of the war, there were not enough passenger coaches available to carry the large number of wounded, so many were obliged to travel on straw placed at the bottom of freight cars.

All hospital trains are now well heated, have plenty of surgeons and hospital corps men, and ample accommodations for feeding and taking care of the wounded. Before these arrangements were completed, and even yet in many instances, groups of women met each train at all way stations and gave the wounded hot soup, coffee, and various things to eat.

The splendid way in which the care of the wounded now is organized, is best seen at the big stations, such as the one in Paris, where vast numbers of wounded are received and distributed among the different base hospitals. Here a large freight shed has been taken over. On arrival the train runs under cover. The wounded and sick are carried, or helped out, into a big central room, which is heated and separated from rooms to the right and left by huge railway tarpaulins. Before leaving the train, surgeons mark on the shoulder of each soldier, in white chalk, "B" for *Blessé* (wounded), if wounded; and "M" for *Malade* (sick), if sick. Over the opening of the tarpaulins to the right is a big sign *Blessés*; over the opening of the tarpaulins to the left is a big sign *Malades*.

Dependent upon whether a man is marked "B" or "M," he is sent, or carried, either to the right or left.

The two rooms marked respectively *Blessés* and *Malades* are identical. Each is heated by big brasiers, with long lines of benches around these brasiers for sitting cases. Each has long lines of supports on which the stretchers are placed at about the height of an ordinary bed. Each has a number of surgeons to attend to emergency cases. Each has a number of women who, voluntarily and without pay, see that every soldier is provided with hot food and drink.

A number of hospital administration officers are busy at a table sorting out the wounded by means of the lists which they have received from the surgeon in charge of the hospital train. A long string of motor-ambulances arrives from all the hospitals. The driver of each ambulance is given a number. When the wounded are sorted, a number are assigned by name to the number given to the ambulance on its arrival. In the meantime the leading ambulances have entered another part of the same freight shed in which are all the wounded and sick. As soon as the wounded or sick are assigned to an ambulance, that ambulance is loaded; the driver is given a list of his patients and sent off to his hospital, being told whether or not to return. By this system, the wounded are taken off the train

quickly and without confusion, are sorted and fed in a warm room, and dispatched to the different base hospitals where they are given every care and comfort modern surgical science and the tenderness of their fellow countrywomen can provide.

CHAPTER XXVII

MODERN INFANTRY IN BATTLE

September, 1915.

WHEN the development of gunpowder reached the point where foot soldiers gave up their pikes and took to firearms, the infantry rapidly became the backbone of all armies, and it has remained so ever since.

While artillery relative to infantry has increased in importance, this is only because it now can extend to its infantry greater aid than has been the case since the days of Napoleon.

When two armies meet, it is the artillery of the attacking side which, by its fire on the enemy's artillery, must help its own infantry over the several thousand yards of country to be crossed before a point is reached where they can use their rifles. From then on the artillery not only must endeavor to keep down the enemy's artillery fire but the enemy's infantry fire. The artillery of the defense, of course, must work to aid its infantry by shaking the enemy's infantry as much as possible throughout their advance, and also by keeping down the enemy's artillery fire. While these rôles are of the utmost importance, it can be easily seen that it is because of the help given the infantry.

The difficult rôle of the infantry in an attack

or on the defensive is also evident. In an attack, the infantry may come under fire of the heavier guns at as much as eight thousand yards from the enemy's trenches. This means facing the explosion of shells of various size filled with high-explosive. Generally they can be heard coming through the air with a rushing, whistling noise; then follows a series of violent explosions, their number depending on how many shells have been fired. These explosions shake the ground for some little distance and tear to pieces almost everything they may hit. The fragments are irregular in shape and produce nasty wounds, not only from the point of view of the man hit but of all those who see them.

When at about five thousand yards from the enemy's trenches, the enemy's field batteries commence with shrapnel. These projectiles, on bursting, throw a cloud of bullets and fragments to the front, very much in the manner of a shotgun. They generally come in large numbers in a very short space of time. This is because the enemy batteries try to cover with their fire the territory over which the infantry is advancing. While these explosions are not as intense as those of the larger shells, they are reasonably so. The bullets and fragments cover considerable territory, and also produce nasty wounds among which are many bone fractures.

If the advancing infantry succeeds in continuing the advance, as they generally do, the point finally is reached where infantry bullets commence to drop here and there on the ground. Still farther along, they begin to go by and occasionally to strike men. Gradually they increase in number, and as the advance continues this fire becomes so efficacious that efforts to move forward result in such losses that the line as a whole remains stationary. Then the attacker digs his first trench. From this point on, comes the most difficult part of the infantryman's task. Generally efforts are made at night to rush across the space between the two trenches and to capture those of the enemy. These attempts usually result in failure and reasonably heavy losses. However, if some of the intervening ground can be held and a new first-line trench built, something has been gained, as the enemy's trench is that much nearer.

The time finally arrives when the two lines of trenches are so close that this method no longer can be used. Then the trenches must be moved forward by sapping. Thus, in one way or another, an endeavor is made to get quite close to the enemy's position, with enough men left alive to rush over some day and take it away from him.

During all this procedure, attacks are made from time to time. The enemy also indulges in counter-attacks, to take back what has been lost,

or attempts to discourage the attacker by taking away some of his trench.

When the trenches are from several hundred to a few yards apart, the fighting becomes more vicious. If they are not too close, the artillery of each side will do its best to destroy the opposing trenches by means of high-explosive shells. When properly concentrated, this fire blows in large sections of trench and in many places makes it impossible for human beings to remain alive. In such cases, the defenders must take refuge in bomb-proofs and try to get out in time to meet the enemy's infantry. Sometimes they do; but often they are caught penned in their bomb-proofs.

Frequently one, or both sides, will tunnel under the other and blow up its front-line trench. These explosions are always signals for the successful side to take advantage of the confusion to make an infantry attack. In these attacks, the object is to rush as many men into, and as far beyond, the enemy's trench as they can penetrate.

For such attacks the men are crowded in the trenches. As it is difficult to get out of these trenches, the attacks really consist of bunches of men led by officers coming out of a trench at different places at the same time and running as hard as they can across the intervening space.

If the artillery fire or the mine explosion has done its work, the men generally cross the first

H. J. R.

BRITISH INFANTRY AT A RESERVE BREASTWORK ON A RAINY DAY
The German trenches are 400 yards to the front

H. J. R.

WHERE AN AUSTRO-HUNGARIAN 10-CM. SHELL KILLED TWELVE RUSSIAN INFANTRYMEN
Parapet of Fort Kobilyani

line of enemy trench without difficulty, and perhaps even the second. However, sooner or later, they come up against a trench full of infantry and machine guns, from which a most effective fire is opened. This generally results in their being driven back into one of the captured trenches. They are not safe here, because almost invariably there is a counter-attack. This means that the blown, tired remnants of the original attackers must try to defend a very much damaged trench. For this reason, in all attacks, line after line of infantry is sent in. The remnants of each line serve to make good the losses of the line ahead.

In this trench fighting the bayonet is frequently used. Aside from the average bayonet wound having a tendency to prove mortal, little mercy is shown. Many men have not the courage to face the bayonet, and either run away or throw up their hands and surrender before the attackers close in. The surgeons, therefore, do not have many patients wounded by bayonets.

The hand grenade is getting to be more and more a factor in attack and defense. They also are used a great deal where the trenches are near enough for the men to throw them into the enemy trench.

Trench mortars are another weapon which cause infantrymen a great deal of worry. They consist of various devices for throwing a large charge of

high explosive into an enemy's trench, too close for the artillery to fire at without risking hitting the trench of its own infantry.

The problem of the offense is to get enough live infantrymen into the enemy's position to break a hole through all his trenches and widen it to the point that he must retreat or surrender. The problem of the defense is to kill enough of the attacking infantry and so scare and discourage the rest, that they cannot break through. Whichever position the infantry soldier occupies, his training and morale must be of the highest or he will never prove a success.

This war has demonstrated from the beginning that hastily raised infantry, no matter how brave individually, cannot succeed.

CHAPTER XXVIII

THE FAMOUS FRENCH FIELD GUN

April, 1915.

A SUNDAY in February was set aside in France as "The Day of the 75" when children and young women sold little medals bearing the numerals "75." The proceeds were devoted to Red Cross work. Since the beginning of the war, almost everywhere in France, one has heard of the "75." In the music halls songs are sung about it, and many of the picture post-cards have allegorical allusions to it.

This "75" is nothing less than the French field gun, the diameter of the bore of which is seventy-five millimeters, or about three inches. Originally brought out in 1897, this weapon in the present war has more than justified the hopes of its inventors and the artillery officers who have worked during many years of peace to get the maximum benefit from the new qualities possessed by it. As much as, or even more than, the German heavy guns have aided the Germans against the Allies, the "75" has helped the French against the Germans. Not only has it helped the French but, again and again, it has been the means of pulling the British troops out of a tight hole.

To comprehend the reason for the success of

this weapon, it is necessary to understand a few of the underlying principles of the use of artillery in battle.

Artillery may be roughly divided into three classes: permanent, siege, and mobile artillery; the last of the three generally being called field artillery. In the permanent artillery, the guns are mounted on carriages permanently fixed in position. The siege artillery is sometimes mounted on wheels and sometimes on permanent carriages, but the guns are always so large and so heavy, that positions must be prepared for them; it therefore takes both time and trouble to move them and to put them in action. In the field artillery, the guns are mounted on wheels, so that they may be moved around easily.

In the permanent artillery and the larger types of siege artillery, the gun carriage consists of two parts: the lower part, which remains rigid when the gun is fired; and the upper part, which slides back over the lower carriage after each shot. This system has many advantages over the old type of field gun, in which all the sections being rigidly attached to each other, the carriage recoiled some distance after each shot and had to be moved back into its former position by the gun crew. This recoil also necessitated the gun being aimed over again after each shot.

For many years means were sought to apply to

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A FRENCH 75-MM. GUN IN ACTION

field artillery the well-understood advantages of having a lower carriage which would remain stationary during firing.

Two things were desired: to find a way by which the lower carriage would remain stationary when the gun was fired, without having it so heavy that it could not be pulled by horses; and to find a means by which when the gun had reached its maximum position in recoil, it would be restored automatically to the firing position. While simple enough in principle, the mechanical difficulties connected with the solving of these problems were great.

The French, in 1897, re-armed their field artillery with the first field gun of this improved type. The lower carriage is held in place, after the first shot, by a spade on the end of the trail and by brakes on the wheels. The gun, on being fired, moves back about forty-six inches in a cradle. Its movement to the rear is stopped by a piston working in a cylinder full of oil. The latter movement forces the oil into a second cylinder, where it compresses the air into another part of this second cylinder. When the air pressure is about one hundred and twenty times normal air pressure, it expands, pushing the oil back into the first cylinder, and thus forces the piston forward. The piston pulls the gun back into the position it occupied before firing.

The means by which the mechanical difficulties

connected with this operation were overcome was the secret of the French "75," and was carefully guarded for many years. There were several other improvements. Where, formerly, to move the gun right or left, the whole carriage had to be moved, the new French gun carriage permitted the gun to be moved right or left without changing the position of the lower carriage. The number of motions necessary to open or close the breach-block of the gun were reduced from three to one. Instead of first putting the projectile into the gun, and then a bag of powder, thus having to load two objects, the projectile and the powder were manufactured in one piece, like the cartridge for a rifle, which could be loaded with one motion. Instead of the necessity of putting a friction primer in a vent-hole, attaching a cord to it and then the men firing the gun having to pull it, a trigger arrangement, very similar to that of a rifle, was introduced.

These improvements meant a great saving of the time necessary between any two successive shots. The lower carriage being stationary, the gun crew can remain at their post inside the gun wheels. The sight, instead of having to be removed for each shot, remains in position. The gunner keeps his eyes constantly on it, so that the gun is always pointing at the target. The lessening of the number of motions in loading and firing saves much time. The French realized imme-

diately that the greatly increased rate at which they could fire meant more than was at first apparent.

Napoleon relied greatly on the fire of his artillery. At the critical moment of a battle, he would smash a hole in his enemy's lines through which his own infantry could enter, and thus gain a victory. He did this by bringing up, at the decisive moment, a large number of batteries which he had held in reserve for this purpose. These would concentrate their fire on some one part of the enemy's infantry.

As the infantry rifle became more powerful, this became less and less possible, because the infantry by their fire could keep the artillery at such a distance that a large mass of guns could not be brought up close enough to do the desired damage. As a consequence, for a long period of years, the artillery could not help its own infantry in their advance against the enemy in the way in which they formerly had done. While the range of artillery was sufficiently great to permit of it firing on the enemy's infantry, at the same time keeping out of range of rifle fire, the rate and accuracy of its fire were not sufficient to produce the desired smashing effect on that infantry. The French soon realized that with the new weapon, the artillery had come into its own again, as by means of the rapidity of its fire this hoped-for effect was possible.

The old method of artillery fire, still used in some

armies, was first to get as closely as possible the range of the object to be fired at—say, for instance, an advancing line of the enemy's infantry. Then a shot would be fired at this range. If it fell short, another would be fired at a greater range, and so on until they got one over the target. Then the target was *bracketed;* that is, it was known to be between two ranges, one of which was short of it and the other over it. The effort then would be made to decrease the bracket until the target was hit. This method may sometimes be used with considerable effect against a target which remains stationary. If the target, however, is continually on the move, as is attacking infantry, it is difficult to produce any great effect.

By the new French system, once having bracketed a target, instead of trying to hit it exactly, immediate advantage is taken of the rapidity with which they can fire to cover all the space within that bracket by exploding projectiles; in other words, having found that the enemy's infantry, or whatever other troops they may be firing at, is between two ranges, they sprinkle all the ground between these two ranges with bursting projectiles. Due to the rapidity of their fire, this can be done so quickly that it is almost impossible for men in this space to run out of it.

Even in getting their target within a bracket, they save time. Instead of firing one shot at a

time until the target is bracketed, they frequently fire all the guns of a battery practically at the same time, each with a different range. In this way, they often bracket the target at the first salvo. This bracketing takes from one and one-half minutes under favorable circumstances, to five minutes under unfavorable circumstances. As soon as the target is bracketed, the battery opens what is called *effective fire*, or fire to produce effect. Frequently thirty seconds are sufficient to cover the desired space with such a rain of projectiles that the troops in it must suffer considerable loss.

Sometimes this effect is produced by having each gun fire one or more shots at a certain range, then increasing the range a little and firing the same number, and so on, until it has gone from the lowest of the brackets to the highest. At other times, the method used is for each gun to fire a certain number of shots at a given range, the aim being moved a certain distance to the right or left after each shot. The range then is increased and the same number of shots are fired as before, but this time the gun is moved the same distance to the left or right after each shot, as it was moved before to the right or to left. Thus the fire is kept up by first increasing the range and sweeping right or left, and then increasing the range and sweeping left or right, until the whole distance within the bracket is covered. What this means, can be

understood from the fact that at a range of 2,500 yards, each gun can cover a front of 250 yards without moving the lower carriage.

A well-trained gun crew fires one of these guns as much as twenty-two times a minute. In spite of this rapidity of fire, the guns can be fired from 4,000 to 6,000 times each before it is necessary to send them to the arsenal to have the rifling renewed. Once the captain of a battery has bracketed his target and made up his mind what kind of fire he is going to use, he gives his orders, and each gun crew goes right ahead as quickly as possible.

The sound of a French battery of four guns in action is easily distinguished from that of other guns by the rapidity of the discharge. Where a number of batteries are in action at the same time, it sounds almost like one continuous discharge.

While making all these improvements, the French realized that guns exposed to such fire as they could produce would soon be put out of action. They, therefore, developed what is called the *method of indirect fire*, which has been more or less understood and experimented with before. However, owing to imperfect sighting apparatus of field artillery and to the general methods of fire of field artillery, it could not be used heretofore with any serious effect.

Roughly, the method of indirect fire consists of putting the guns of a battery far enough down the

side of a hill away from the enemy, so that they cannot be seen from the front, but not so far down that they cannot be fired over the crest of the hill at the enemy in the distance. An observer is always posted who can see both the enemy being fired at and some point, such as a church steeple, which the men at the guns also can see; this point, called the auxiliary aiming point, even may be in rear of the guns. By simple trigonometrical calculations, which, being virtually worked out mechanically, take little time, the observer can tell the gun-pointers how they must set their sights, so that when they see the auxiliary aiming point in the center of their sight, the gun is pointed at the enemy.

Even more important than that a gun should hit the mark is the consideration that what it does shoot should produce the desired effect on the target. The old projectiles were solid round cannon balls. Later, shells were invented. These were simply hollow cannon balls filled with powder which, by means of a fuse, were exploded a certain time after leaving the gun or by impact with whatever they hit. When these shells burst, the pieces flew in all directions.

An English colonel, named Shrapnel, invented a projectile known ever since by his name, which consists of a projectile full of bullets and an explosive of some kind. Shrapnel, like shell, bursts as many seconds after leaving the gun as the fuse has been

set for, or by impact with the object hit. When it bursts, instead of the pieces flying in every direction, as do the pieces of a shell, they are thrown to the front in very much the same manner as the shot from a shot gun.

It is an interesting fact that shrapnel was first used with considerable effect by the British on the French infantry during the battle of Waterloo. Since its invention this projectile has been employed against men and horses, for, because of its scattering effect, its bullets cover a considerable ground area. For instance, at 3,500 yards, the French shrapnel covers an elliptical space about 300 yards long and 25 yards wide. However, in the 140 yards of this space farthest away from the gun, the bullets have so little velocity that they do not, as a rule, seriously injure anyone they may strike.

Prior to the war, shrapnel was considered to be the proper projectile to be used against troops and high-explosive shells, the right projectile for use against material of any kind, such as guns, ammunition, wagons, walls, and earth works. The French high-explosive shell always explodes by percussion; that is, the force with which it strikes the object aimed at causes it to explode.

The French shell bursts on explosion into two hundred pieces sufficiently large to be dangerous, while the rest of it practically is pulverized. In

plan the pieces fly in five different directions: straight to the right; straight to the left; to the right front; to the left front; and to the rear. Between these five groups, there are spaces in which there are no pieces. This explains some of the apparently marvellous escapes which many men have had while under high-explosive shell fire.

In one instance, a captain and the lieutenant of a battery were standing almost side by side. A German high-explosive shell burst nearby. It killed the captain instantly, but it did not injure the lieutenant, merely knocked him down and rolled him over about ten times.

In another case, a colonel and a captain were standing about ten yards from a third officer. A German high-explosive shell burst practically on the latter and he never has been seen since. The colonel, who was standing on the side of the captain farthest away from the officer who disappeared, was very badly wounded, while the captain escaped uninjured.

There are cases of men being killed by a burst of one of these high-explosive shells without having a single mark made on their bodies. This is caused by the shock.

The French high-explosive shell does damage only for about twenty yards from the center of its burst. It makes up for this, however, by literally tearing nearly everything to pieces within

this range. It uproots the ground in the direction taken by each group of fragments in a way that would suggest a giant having used a large hatchet on it. It has little effect against trenches unless it bursts directly above or in them, when it kills everybody for about fifteen or twenty yards along the trenches. If it strike a field gun, it damages it so badly that it is no longer of any use.

As the war goes on, the French artillery is coming to use more and more of the high-explosive shell and less of the shrapnel. While the high-explosive is not as effective against trenches as is to be desired, it is much more so than is shrapnel. German prisoners describe the fire of these guns as being terrible.

The question may be asked, Why have not Germany and other countries as good a gun as the "75"? This gun dates from 1897. Just before the French brought it out the Germans re-armed all their field artillery with the best gun of the old type which had ever been built, at an enormous expenditure. Therefore, when the French sprang their new type of gun, the Germans for financial reasons were for a number of years unable to re-arm their field artillery. When they did so, they converted their old guns into the new type, because of the enormous expense of getting entirely new guns. This left them with a gun inferior to the French in practically every way.

But the possession of this splendid weapon is not sufficient to insure success in war; it is more necessary to know how to use it, and, above all, to have men well trained in handling it. During years of peace, the French have carefully prepared the officers and men of their artillery, so that they might get the maximum value from the excellent weapon which they were given to use.

The marked superiority of the French field artillery to that of either the British or Germans, shows that the years of preparation and the money spent to procure these guns were one of the best investments France ever has made.

CHAPTER XXIX

ARTILLERY IN THE PRESENT WAR

September, 1915.

THE average person, if asked what he believes to be the most prominent feature of the fighting on land in the present war, generally answers, aeroplanes or the trench warfare. He is wrong. While aeroplanes have fallen far below what the popular mind expected, they have not surpassed in any material way what was expected of them by the military authorities. Trench warfare is simply a revival on a larger scale, with a few minor changes, of what has been well understood and practiced for many years.

The average soldier or officer, if asked what he believes to be the most prominent feature in the present war, will promptly reply, the artillery.

From the beginning, it has been the artillery which has lived up to the expectation of its officers. It has been the artillery which, by the intensity of its fire, has surprised even the other branches of the service. While they knew that it had improved, with few exceptions they had no conception of the extent of these improvements.

At the beginning of the war, every cavalry division of 3,600 to 4,000 men had twelve field guns, the diameter of whose bore was about three inches.

Every division of 12,000 infantry had 36 or more field guns of a similar character. In addition, every infantry division, or in some armies every army corps—which generally consists of two divisions—possessed a number of heavier guns. As the war progresses, the number of these heavy guns has increased. Not only have more heavy guns been brought up, but guns of heavier caliber — that is, with bores of greater diameter. So many of these guns have been brought up during the trench fighting, that in some of the more important parts of the line occupied by a division of infantry, instead of only the thirty-six field guns which ordinarily belong to the division, there are more than a hundred guns of all calibers. These heavy guns vary in size — from howitzers four and one-half inches in diameter to the German sixteen-inch mortars. The lighter ones are mounted on wheel carriages, pulled by eight horses; the heaviest ones can be moved only in sections on trucks, pulled by traction engines. Some naval guns are mounted on railway flat cars behind circular shields, which give almost as much protection as a turret; these guns, of course, can be used only along the railways. In spite of the difficulty of moving these different kinds of heavy guns, they are always in demand, because of their great range and the destructive effect of their projectiles.

The most prominent feature along the edge of the battlefield is nearly always the artillery ammunition trains going to the ammunition re-filling points, well out of artillery range. Everywhere just off the edge of the battlefield also are seen parked the extra ammunition wagons and the horses of the batteries which are in action.

Night is about the only time it is possible to see artillery on the move on the battlefield, because of the concealment which darkness gives. Even then, the batteries generally move strung out at intervals along the roads, so that should the enemy suddenly shell the road on which they happen to be, the minimum amount of damage will be done.

The gun positions are prepared very carefully, if possible before the batteries are put in action. A favorite place is along a hedge at the bottom of a line of trees. Underneath the trees of an orchard is another good position. In these cases, little huts consisting of branches with their leaves are generally built over the guns, so that they blend into the landscape, particularly when seen from above. Sometimes they are placed in the middle of a field, where roofs of logs and planks thickly covered with earth are generally built over the guns. Again a hay stack is pulled to pieces and the hay used to cover the guns when they are not in use. In all instances, the caissons and limbers

not needed with the guns while in action are taken well to the rear, or on a flank, where they are put under a line of trees alongside a hedge or around the sides of houses. Often these are covered with branches of trees or with hay, so that it would be difficult for an aviator to pick them out. The horses are nearly always taken back out of artillery range where they are cared for and exercised daily by men detailed for this purpose.

The light field guns, which in practically all armies are about three inches, are generally found in the zone from 2,000 to 4,000 yards from the enemy's trenches. The heaviest guns, such as the 305 mm. (about 12 inches) howitzer, are found at from 6,000 to 8,000, or even more, yards from the enemy's trenches. The guns of intermediate caliber — such as ten-inch howitzers and fifteen-centimeter rifles are found somewhere between the light field guns and the heavy ones.

The guns, in addition to being concealed from aviators, are nearly always also placed in gun-pits so that they will have a certain amount of protection from the enemy's fire, should the enemy's batteries discover where they are. However, they are practically always far enough back to be out of the range of infantry fire.

The gun-pits vary somewhat in detail. Generally, a gun-pit is a rectangular excavation deep enough so that when the gun is placed in it, the

muzzle is just above the level of the ground. To each side of it are built bomb-proofs — one for the gun crew, and the other for the ammunition — which are merely deep, underground rooms, roofed with logs and a thick coating of earth, the top of which is on a level with the surface of the ground.

As the ordinary field gun cannot be elevated sufficiently to fire at aeroplanes almost directly overhead, special gun-pits are built so that the trails of the guns can be below the surface of the ground, thus making the muzzle of the gun point up in the air. One way of doing this is to dig a cylindrical pit of such size that when the end of the trail rests in the center of the bottom of the pit, the gun will rest on a circular wooden platform constructed around the top edge of it. In this way, the gun can be pointed quickly in any direction at an aeroplane up in the air. Near these circular pits are always gun-pits of the regular type, so that when no aeroplanes are around, the guns can be run into them and used in the ordinary way.

Roughly, opposite the center and in rear of every battery, there is a small bomb-proof or earth shelter of some kind from which the battery commander can see his guns. Here also is a telephone which connects him with the next higher artillery commander.

Artillery officers are posted as observers at points from which they can note where the shells fired are bursting. It is seldom that the men or officers

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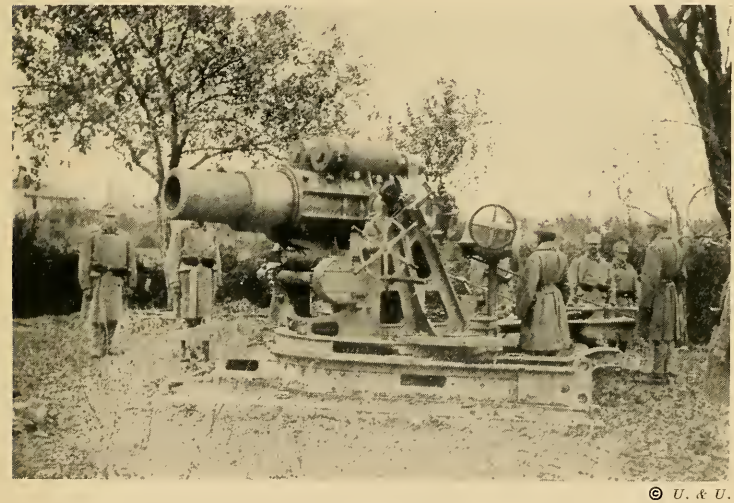
GERMAN AND AUSTRIAN SOLDIERS MOUNTING A 305-MM. MORTAR IN POLAND



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AN AUSTRO-HUNGARIAN 305-MM. MORTAR MOUNTED AND READY FOR ACTION

with a battery can see the target at which they are firing; they can see only some point, such as a church steeple, which may be, and generally is, in the rear of the guns. This point is called the auxiliary aiming point. By simple trigonometrical calculations, practically worked out, the battery commander knows that when the man who aims each gun sees the auxiliary aiming point in the center of his sight, that the gun is pointing at the target thousands of yards in front and hidden from view, either by the gentle slope back of which the guns are placed or by the trees, houses, and other features of the landscape which intervene between the gun and the target.

The effectiveness of the fire of the guns depends upon the skill of the officers who are detailed to observe the result and to telephone or signal the necessary corrections to the gunners. These observers, or spotters, as they are called, may be in the trenches, in a church steeple, on the top of a hay stack, or up in an aeroplane. They are connected by telephone with the batteries and higher commanders of the artillery, except when in aeroplanes.

The observation stations in the roofs of houses are very interesting. Generally the station is in a house which has been badly mauled by artillery fire, as have all houses close to the trenches. On entering one of them, the stairs leading from the lower

story to the attic are found practically to be shot away, and what is left to be covered by debris caused by the explosion of a shell in the house. Everywhere are pieces of brick, plaster, chunks of furniture and other household articles.

The attic, finally reached, is covered with pieces of brick and slate knocked from the chimneys and roof. In one corner a platform of heavy planks has been built which is reached by a ladder. On top of this platform is a parapet constructed of sacks filled with broken brick and other debris. Behind this parapet is stationed an artillery officer, who has a map in one hand and a pair of field glasses in the other. Below the platform is another parapet, similarly constructed, behind which is a soldier with a telephone.

Looking through the hole in the roof used by the artillery observer, one sees a long, irregular line of earth running across a field about seven hundred yards away and disappearing to one side in a clump of woods and to the other behind a very much battered group of farm buildings nestling among a number of trees. This is the trench of the Allied infantry. About one hundred and fifty yards farther distant is a similar line of dirt across the same field. This is the German trench.

Off to the rear, where are the guns, one hears the *boom* as one is discharged, followed by that "wind-whistling-around-the-corner" noise which

a shell passing overhead always makes, then a thud. A cloud of earth and smoke flies up just in front of the German trench. The officer takes his eyes from his glasses, looks at his map for an instant, and says to the telephone man just below him: "Fifty yards short." The operator repeats this into the telephone. Almost immediately, another shot is fired, this time resulting in an upward spurt of earth and dirt just the other side of the German trench. The battery which is firing, is doing what is called *registering;* that is, it is finding the exact range to different points of the enemy's line, so that in case there is an attack to be repelled, or to be made, it will know just how to fire in order to do the most damage.

The map in the hands of the artillery officer is marked off in squares five hundred yards to a side. As all the maps used by the officers are similarly divided, it is easy for them to locate by means of these squares the position of any object to be fired at and to telephone directions, so that the officer receiving the communication also easily finds the desired object. Incidentally, the observer is very careful not to expose the map above the top of the parapet, as the movement of any white object across the hole in the roof probably would attract the attention of some German snipers, who are keenly on the watch for all artillery observers.

While artillery observers in the trenches are

nearer to the enemy than those in the roofs of houses, the latter can do better work, as they are above the level of the ground. The artillery of both sides frequently fire at church steeples and roofs of houses so as to dislodge as many observers of the other side as possible.

When spotting is done by an observer in an aeroplane, a reconnaissance first is made in an attempt to locate the enemy's batteries. At the end of the reconnaissance, the observer returns to the battery and indicates on the map where the enemy's batteries are located. Whenever the batteries are ready to fire, the observer makes another trip in an aeroplane to see if the enemy's batteries are still in the same place. If they are, he signals to the battery, either by wireless or by smoke signals, that he is ready to spot. The battery then opens fire, and the results of the fire are signalled back from the aeroplane.

The aeroplane is probably the greatest enemy of the modern battery when in action, as it is the only sure means the enemy has of discovering the exact location of the guns. Frequently batteries stop firing when enemy aeroplanes appear in the neighborhood, as the flash from the gun when it is discharged attracts the eye of an observer in an aeroplane more quickly and more surely than anything else. Sometimes, in the hope of deceiving observers in aeroplanes, imitation guns made of

logs placed on wheels are put out where they can be seen, but not too easily, from an aeroplane.

While infantry and machine guns in action make considerable noise, it is nothing compared with that made by the discharge of guns and the bursting of their projectiles, particularly when a large number are firing at one time. The noise of the discharge of the ordinary field gun is not very loud. The French field guns, however, are fired so rapidly that sometimes it seems almost as if they must be machine guns of very large caliber. Shrapnel exploding makes a considerable racket. The bursts of high-explosive projectiles, even of as small a caliber as the three-inch field gun, are particularly violent. Large guns, when discharged at a distance, sound like a heavy door being slammed violently. Their projectiles strike the ground with a heavy thud and explode, shaking everything in the vicinity. The jar from the explosion of a fourteen-inch German mortar shell is perceptible sometimes a mile away. Some of the heavier projectiles give out clouds of yellow, whitish smoke; others, clouds of black smoke. The distinguishing feature of the burst in the air of high-explosive projectiles is the instantaneous brilliant flash of white light.

If the firing is not heavy, the enemy's projectiles can be heard coming through the air, and with but little experience, the men can tell whether they will burst near them or well to the right or left.

While high-explosive projectiles are very powerful, the damage done by them does not extend very far away from the center of their burst. Although the strongest masonry buildings cannot resist them, it takes a considerable number to destroy a large building, such as the Cloth Hall at Ypres or the City Hall at Arras. Only direct hits are effective. A case is known of a fourteen-inch mortar high-explosive shell which burst in a field alongside of a small farmhouse, making a hole in the field about fourteen feet in diameter and about eight feet deep. The edge of this crater was not six feet from the side of the farmhouse. While the wall of the farmhouse was spattered with earth from top to bottom, no other damage was done. Had the projectile hit the farmhouse, it would have demolished it.

A favorite practice is to shell roads along which it is reasonable to suppose that men, food, and ammunition must proceed to reach the trenches. The holes made by shell fire in a macadam road vary from about two and one-half feet in diameter and one and one-half feet deep made by an ordinary field-gun projectile, to ten or eleven feet in diameter and six to seven feet deep made by a fourteen-inch mortar. In order that the roads may be kept open for traffic, engineer soldiers often are kept busy in the intervals between shellings filling up the holes in the roads. Many times automobiles,

with staff officers in them, going quickly along a road, have been hit by shrapnel. Then the automobiles look more like colanders than anything else. Alongside the ruins of the City Hall in Arras are the remnants of two automobiles which were caught there and destroyed by bursting shells.

Bursting shrapnel or high-explosive shells hitting among troops in the open, send them down in little groups of killed and wounded. As long as the men keep well down in a trench they are quite safe from shrapnel fire. Even high-explosive shells bursting just in front or just in rear of a trench do little or no harm. However, when one bursts in a trench or just on the edge of it, a great deal of damage is done. The larger shells will fill in a section of trench with earth for a distance of fifteen to twenty yards, killing and wounding everybody in that section and burying some under the dirt thrown down. The men wounded generally not only have one or more bones fractured but are frequently very badly mangled as well.

When shells commence to burst near a battery, almost always everyone seeks shelter in the bomb-proofs. While these are of sufficient thickness to stop fragments and ordinary shells, they will not intercept one of the fourteen-inch mortar shells should it make a direct hit. Once it is reasonably certain, from his fire, that the enemy has found the range to a battery, the battery changes its position.

Troops and guns may have shells burst very near them and yet escape injury. Once, however, the shells drop directly among them, the damage not only is great but is done very suddenly. A case is known of a battery which occupied a position for two months without suffering any loss. One morning, a *taube* hovered over it for a few minutes. Shortly after, a few shells burst in front of the battery and then almost immediately they were bursting in the battery. In about three minutes, sixteen men were killed, sixty wounded, and three guns so badly damaged as to be of no further use.

One of the most striking phenomena of a modern battlefield is the way in which artillery fire is switched on and off in different localities. Everything may be practically quiet in a certain vicinity with no shell bursting within a thousand yards or more, and then suddenly, without warning, or only with the warning of an aeroplane flying overhead and perhaps a preliminary shot or two to find the range, that same locality will be torn up by bursting shells.

Not only is the material effect produced by artillery great, but also the moral effect. There are numerous instances where it has proved too much for men, causing them, as a consequence, to bolt to the rear. This is much more true of the British Indians, and the French Moroccans

and Sengalese troops than of the white British and French soldiers.

The cessation of artillery fire, even though it leave the troops under heavy infantry fire, comes as a welcome relief. One reason for this is that under infantry fire, the men generally are busy firing in return; under artillery fire, they often must sit in the bottom of a trench and listen to the exploding shells, having plenty of time to wonder which one is going to burst among them, and now and then seeing the havoc created when one does burst nearby.

Modern artillery has three tremendous advantages: rapidity of fire, long range, and great smashing effect. One of the advantages taken of the rapidity of fire is to establish what is called a *curtain of fire*. To do this, the artillery commander selects a comparatively narrow strip of ground in rear of and parallel to the enemy trenches. He then has his batteries cover this strip with bursting projectiles. Most infantry will not go through such a curtain of fire. However, some of the most highly-trained and best-disciplined men will sometimes do so when such a curtain is made up of bursting shrapnel. When high-explosive shell is used, practically no one will go through it. Of course, this curtain of fire not only shuts off any supports needed by the men in the front-line trench but their food, water, and ammunition

supply as well. Thus, when the enemy's infantry attack finally is made, these soldiers, cut off from help for several days, have to meet it as best they can.

The long range of modern artillery is used not only to smash distant targets, but to keep the guns out of range of the enemy's infantry fire, and also to concentrate the fire on some one point of the enemy's lines without having to assemble the guns in one thick line, thus offering a good target for the enemy. The smashing effect of modern projectiles is of the utmost importance, because, coupled with the ability to concentrate, it gives the artillery the power literally to tear trenches to pieces and make it very difficult for human beings to remain alive in them.

When infantry took to digging itself in, in order to gain protection against fire, the artillery lost the power it had had in the days of Napoleon of actually blowing a hole in the enemy's infantry through which its own infantry could advance. This was for two reasons: because, until the development of high explosives, artillery could not materially damage a trench, even if successful in getting a shell into it; and because the trajectory of the ordinary field gun was so flat that it was almost impossible to drop a shell into a trench.

The short gun, or howitzer, which shoots up into the air, causing its shell to drop almost

perpendicularly, could drop a shell into a trench. However, it was not very accurate, and as a great part of its energy was expended in throwing its shell into the air, its range was short. This meant it had to come so close that the regular field pieces could put it out of action by their fire. If heavier guns were manufactured, the difficulties of moving them were so great, they could not accompany an army.

As high-explosives were developed, the first of these obstacles disappeared. Gradually the rest of them have been overcome. The result is that the present war shows artillery to have regained its old position, in that, in spite of the power of modern infantry rifles and of machine guns, in spite of the protection of trenches, it once more can smash a hole in the enemy's line for its own infantry to enter.

This was the way the Germans and Austro-Hungarians broke through the Russian line on the Dunajec in May and started the Russian retreat, which lost to Russia all of Poland and most of her conquests in Galicia.

When Przemysl was retaken, the fire on the forts, which incidentally, because of their prominent position, made excellent targets, was so intense that the Russians withdrew their infantry. They apparently intended to rush them back in time to meet the German infantry attack. The

latter were too quick for them, however, and had the forts before the Russian infantry could come up again.

The smashing effect of well-handled modern artillery, when it has a good target, is so great that the Russians removed their artillery from some of the Polish fortresses and used it from field positions while defending these places. This was true both at Ivangorod and Brest Litovsk, the two southern fortresses of the Polish quadrilateral.

General Kövös, the Hungarian general who took Ivangorod, stated that on most occasions where a heavy artillery fire was concentrated on a Russian infantry trench, they would withdraw their infantry to bomb-proofs in rear of it. They then would try to get back to it during the interval in which the attacker's artillery must stop, for fear of hitting his own advancing infantry.

He also stated that one of the contributing causes of the Russian retreat was the fact that they apparently did not have as much artillery ammunition as the Germans and Austro-Hungarians. Therefore, they were unable to keep the German and Austro-Hungarian artillery fire down, or to subject the enemy's infantry to so heavy a fire as the Russian infantry had to stand. Certainly, the volume of German-Austro-Hungarian artillery fire whenever an action was going on and

the large piles of artillery ammunition always seen in central points in rear of a battlefield, testified to the possession of immense quantities.

General Kövös said that the large caliber and long range of the big guns more than outbalanced the much more rapid rate of fire of the usual field gun when attacking an intrenched position. The large caliber permits of a sufficient amount of high-explosive being used in the projectile to do considerable damage. The great range permits the gun to be used out of range of the enemy's light field pieces, which, if within range, because of their rapidity of fire, could drive away or destroy the crews of the big guns.

He said that the rapidity of fire of the light guns, of course, was invaluable whenever troops came into the open for an attack or when driven from their position and retreating.

The Austro-Hungarian 305-mm. howitzer has been very efficient throughout the war. A large part of the work credited by the Allies to the 420-mm. in reality has been done by the 305-mm.

One of its marked features is its mobility. This 305-mm. howitzer, the carriage of which is in two parts, and a steel platform on which the gun and carriage rest during firing, travel on four steel trucks with heavy wheels, which are pulled by one or more traction engines, depending upon the condition of the roads. When the firing position

is reached, the ground is leveled, the steel platform put down, and the gun and carriage mounted on it. The roar of these guns as they are fired, the noise of their projectiles going through the air and their burst as they land, can be distinguished above all the other din of combat.

Two of these guns, called affectionately by their crews *Greta* and *Louisa*, participated in the artillery preparations which preceded the assault on the Russian position in front of Ivangorod. Though seventy Austro-Hungarian guns were in action, and to their left probably an equal number of German ones, to say nothing of the Russian guns, the noise made by *Greta* and *Louisa* was heard above all.

While the increase in the power of artillery has been tremendous, it must not be forgotten that advantage of this increased power can be taken only when competent gun crews and officers handle the guns and well-trained infantry are ready not only to enter the gap made by the artillery but to keep from being shoved out, and to enlarge the opening until the enemy is forced to retreat.

CHAPTER XXX

CAVALRY IN MODERN WAR

September, 1916.

AMONG the ideas which have gained currency since the outbreak of war, the most erroneous is the belief that the day of cavalry is past. This misconception apparently is founded on the thought that the accuracy and volume of modern fire limits cavalry to reconnaissance duties, and that even these duties are being usurped by aeroplanes.

It is true that mounted charges are few and far between, but all cavalries are armed with rifles and are therefore able to fight dismounted as infantry. This method, well understood in the American cavalry since the Civil War, is being practiced more and more by European cavalry, particularly the German cavalry, which has made extensive use of dismounted action.

At the beginning of the war, the German patrols sent out to gather information, whenever attacked, promptly galloped to the rear and behind carefully-concealed dismounted cavalry with machine guns. This resulted in many cases of French and British cavalry being badly cut by the fire of the dismounted men and the machine guns, and was the cause of reports that the German cavalry had run away.

The great point about cavalry is its mobility. It can get over long distances in a manner which infantry never can equal. Even the use of large numbers of motor-buses does not give the infantry the same mobility, as there are not enough buses to carry large bodies of troops and these buses are confined to good roads.

Cavalry played a significant rôle on both sides in the Allied retreat and the German advance to the Marne. During the battle of the Marne, the German cavalry held the gap in the German line between von Kluck's flank guard north of Meaux and his main force on the right flank of the main German line. When the Allies were endeavoring to extend their line to Antwerp, and the Germans were trying to reach the Belgian coast in October, 1914, the cavalry of both sides played an extremely important part in the region of Lille and Ypres; in fact, a large part of all the earlier engagements in this region were fought by cavalry.

In the eastern, or Russian, theatre of war, the cavalry has played a prominent rôle from the beginning. Both the Germans and the Austro-Hungarians continually speak of how their movements have been hampered by the superior numbers of the Russian regular cavalry.

The general of the Twelfth Austro-Hungarian Army Corps is an officer who has spent his whole life in the infantry service. On being asked his

H. J. R.

FRENCH DISMOUNTED CAVALRYMEN ARMED AND OPERATING AS INFANTRYMEN IN FLANDERS

H. J. R

HUNGARIAN CAVALRYMEN

opinion, formed from personal experience, as to the usefulness, or the contrary, of cavalry under modern war conditions, he stated that it could be taken as axiomatic that as long as war existed on this earth, cavalry not only would be useful but highly necessary.

He added that on his recent advance through southern Poland, he found the Russian retreat covered by large bodies of cossacks, and that only the fighting superiority of his cavalry enabled him to push the Russians the way he wished. While in this case the Russian cavalry probably was superior to his in numbers, they were made up of cossacks whose fighting qualities are distinctly inferior to those of the regular Russian cavalry.

He also stated that however much the aeroplane might replace cavalry in reconnaissance work, this would not affect the value of cavalry, because mobility is its chief asset, and in these days of long battle fronts, mobility makes cavalry especially valuable as a reserve.

A good example of the use of cavalry in filling in gaps between different forces was afforded by this same advance. The Austro-Hungarian and German troops coming in general from the west, had driven the Russians into Ivangorod on the Vistula. At the same time, the army of the Archduke Joseph Ferdinand, with that of von Mackensen on its right, was advancing in general

from the south between the Vistula and the Bug rivers.

When the army coming from the east halted in front of Ivangorod, the Austro-Hungarian cavalry division belonging to it took position on the right, or southern, flank along a front of more than ten kilometers along the Vistula. They then brought detachments across the river which finally came in touch with the Archduke's cavalry coming from the south, thus filling in the gaps between the two armies and making the Russian position in Ivangorod more precarious. Later, when some infantry divisions had succeeded in crossing the Vistula between Warsaw and Ivangorod, it was discovered that there was a considerable gap in the Russian line between these two places.

Each infantry division of an army has a certain amount of cavalry attached to it, called *divisional cavalry*. In addition, every army has its independent cavalry division, that is, divisions made up entirely of cavalry.

Immediately this hole was discovered, ninety-six squadrons (about 15,000 men) were gathered together by taking the cavalry division attached to the Twelfth Corps, all the divisional cavalry of the corps, and most of the Archduke's cavalry. These ninety-six squadrons then were shoved into the gap between the Russian forces, and because of their mobility were able to display such activity

as to hasten considerably the evacuation of Ivangorod and the retreat of the Russians from the Vistula to the Bug River.

At the present time, due to the difficulty of getting exact data covering both sides of every action in which cavalry has been engaged in this war, it is too early to come to definite conclusions. However, there are certain marked tendencies which seem to indicate, in a general way, what these conclusions will be.

While prior to the Franco-Prussian War, cavalry with some exceptions, nearly always was used for reconnaissance purposes, this duty was always subordinate to that of taking part in the battle proper and, above all, in completing a victory by pursuing, cutting off, capturing, or otherwise destroying the retreating enemy.

The Franco-Prussian War put emphasis upon the reconnaissance duties of cavalry, because the German cavalry took advantage of the fact that the French cavalry mostly was kept concentrated and with the infantry to spread out far in front of the German armies for reconnaissance purposes, also because both cavalries disdained to fight on foot and, therefore, contented themselves with waiting for opportunities to make mounted attacks. These opportunities came but seldom, and in the majority of cases furnished examples of the failure of the mounted attack rather than the reverse.

Many of the more thoughtful cavalry officers in all countries have felt for years that undue emphasis was being put on the reconnaissance duties of cavalry, and that cavalry should not consider itself an obsolete fighting arm merely because it cannot habitually use the saber, any more than infantry should rule itself off the battlefield because it cannot habitually use the bayonet.

These cavalry officers have welcomed the possibility of the aeroplane taking over the duties of reconnaissance from the cavalry, as that means the end of the period in which cavalry has been split up into small bodies, and the return to its use in large bodies under cavalry leaders. In other words, its use would be on a much larger scale, but in the same manner in which Sheridan in the closing days of our Civil War cut off and destroyed Ewell, Lee's rear guard, and afterward stopped Lee until the infantry could arrive.

The exponents of this use of cavalry point out the fact that though there have been big advances and retreats in the present war, there have been no decisive victories, with the exception of those gained by the Germans in East Prussia which, considering the situation as a whole, were relatively small. The reason is that infantry cannot catch infantry. Cavalry can; but as modern infantry travels in large numbers, it can take care of itself, unless attacked by large bodies of troops.

Thus, it will be seen, a decisive victory can be gained only by catching the enemy's infantry. This can only be done by cavalry, but it will not be successful then, unless the cavalry is numerous.

CHAPTER XXXI

MACHINE GUNS IN THE PRESENT WAR

September, 1915.

THE present war has brought about a great development in the use of machine guns. The proportion of these guns to troops has greatly increased, particularly on the defensive; in fact, the number used in defending a position seems only to be limited by the number which can be obtained.

Prior to the war, there were two schools with respect to the best use of machine guns. One school was inclined to use them very much as artillery; that is, at long ranges, and to cover the advance of infantry or dismounted cavalry. The other school maintained that a machine gun produced infantry fire, that it could not compete in any way with artillery, and was useful merely to supplement or replace infantry fire, not only at infantry ranges but especially at the shorter ranges.

This latter school insisted that machine guns were valuable chiefly as a reserve, to be put in at decisive moments when the fight had become intense. In other words, when the infantry or dismounted cavalry had reached a decisive range, where a sudden increase in the volume of fire might mean the beating down of the enemy's fire or the

prevention of the enemy's fire reaching an overwhelming volume, the battalion or regimental commander, by putting his machine guns in action, could produce the desired effect, because of the ability of the machine gun to produce suddenly a large volume of fire, which, though not accurate at long ranges, is sufficiently so at the shorter ranges.

In all attacks the supporting artillery ceases to fire when its own infantry or dismounted cavalry has arrived near the enemy's trenches, otherwise they might hit them, as has happened at various times during the present war, particularly during the British attack at Neuve Chapelle, in March of this year.

The range at which the artillery stops firing depends, naturally, on circumstances, but is generally such that the attacking troops have to cover the last two or three hundred yards to the enemy's trenches, unsupported by the fire of artillery. The school which believed in using machine guns to increase the volume of fire in the last stages of the fire fight, maintained that this stage of the attack was, above all others, the time when the machine guns should come into action, and by their volume of fire keep the enemy down in his trenches so that the attacking troops can reach the position in sufficient numbers to capture it. Thus far, the present war seems to have borne out entirely the contention of this school. Machine-gun

fire has not proved particularly effective at long ranges, especially when the amount of ammunition used is considered. What is more important, is that machine guns by opening fire at long ranges frequently betray their position, with the result that the enemy's artillery promptly fires on them and either drives them off or destroys them. Because of the range of artillery and the power of its projectiles, machine guns are powerless against it.

The cavalry machine guns have been very useful in all the big advances and retreats. They have also been used in the trenches, when the cavalry has taken its turn in them, as has been done by the cavalry of all armies. On the advances and retreats, the machine guns, with dismounted cavalrymen using rifles have been used to support the patrols sent out to gather information, to delay the advance of the enemy's cavalry, and frequently to ambush large parties of enemy cavalry which have advanced too precipitately.

It is particularly in the defense of an intrenched position that machine guns are useful. Here, as in a fight in the open field, they must not open fire too soon, or the hostile artillery will wipe them out. Therefore, they generally remain silent until the enemy's infantry comes out of its trenches and starts across the intervening space in its endeavor to capture its opponent's trenches. Then the

Courtesy Chicago Tribune

FRENCH MACHINE GUN READY FOR ACTION

machine guns open fire and keep it up until the last of the enemy left alive or unwounded have run back into their own trench, or until captured or put out of action by a hand grenade, should the attack prove successful.

The Germans frequently arrange their trenches so that if occupied by the enemy a machine gun can fire down them, thus enfilading and driving them out. If the configuration of the ground will permit it, they place most of their machine guns in some position back of the first line, to avoid probable destruction by the heavy shelling to which a trench is subjected by the enemy's artillery before an attack is made.

In accordance with this principle, where the Germans have been able to prepare a position ahead of time, they select a gentle slope and put three lines of trenches on it. The machine guns are placed in the last line, thus being able to shoot not only over the first two lines at any approaching enemy, but to make a strong third line very difficult to capture, even though the first two lines are taken; then, too, until this third line is captured and a hole thus broken entirely through the position, little is gained by the capture of the first two lines.

Frequently in Poland there have been large stretches of country where the invaders have had no other desire than to remain on the defensive

Here the Germans strongly intrenched and garrisoned the important points. Between these points they constructed several lines of trenches, each having a wide barbed-wire entanglement in front. These trenches have comparatively few troops in them, but a considerable number of machine guns. While a Russian attack might succeed in breaking through most of the entanglements, in spite of the machine-gun fire, it would take so long that the German reserves from central points in the rear of the line would have ample time to come up.

Considerable use has been made of the machine gun for sniping purposes. In this use the gun, loaded and ready to fire, is carefully aimed at a loophole, or some other point, where one of the enemy is liable to appear. The man operating the gun takes position alongside and with a pair of field glasses watches the point chosen. Instantly any one appears, he fires the gun. Apparently this method of sniping has been very effective.

In general, it may be said that now that the machine gun is being used in its proper sphere — as infantry, not as artillery — it has more than justified its existence when handled by well-trained men, as is best shown by the rapid increase in number in all armies at present in the field.

CHAPTER XXXII

AIRCRAFT IN THE PRESENT WAR

April, 1915.

THE present war is the first one in which aircraft have been used to any great extent. What has been done with them up to the present is intensely interesting, as it shows their positive uses and limitations, as opposed to what before the war was merely opinion.

In working with aircraft before the war, the military authorities of the different countries soon realized their great limitations so far as being offensive weapons was concerned. These men believed that their chief functions would be reconnaissance, the gaining of information, and the observation of the effect of fire on the enemy. But not so the public; its mind was concentrated on the destruction which might be brought about by aircraft. Serious articles were written showing how aircraft, by dropping bombs on battleships, on towns, and on columns of troops and guns were going to render war impossible. One of the most sedate of American magazines at one time published a long article with illustrations, showing, among other things, how a column of infantry while marching down a road would allow itself, without making any resistance, to be wiped out by an enemy aeroplane which

hovered overhead and vigorously used a number of machine guns.

In aviation contests, machines flew over nicely outlined battleships marked on the green grass, while the aviators from heights, very often no greater than three hundred feet — hardly more than pistol range — dropped bombs on the outlined battleships. In their mind's eye, the spectators saw a twelve-million-dollar dreadnought flying into fragments. The public habitually made two errors: in overestimating the effect of high explosives, and in forgetting that warships and troops are able to hit, and hit very hard, and that this very ability to hit is the reason for their being brought into existence.

In all the big armies of Europe, a great deal of money was spent in perfecting, so far as possible, aircraft for military purposes. Great Britain and the United States lagged behind, as their governments paid little or no attention to the pleas of their military officers for enough money to make proper preparation for war in this new arm; this is even more true in the United States than in Great Britain. France apparently led in military aviation. However, in all French aviation schools there were considerable numbers of Germans, who always worked hard and had little to say. What the German military aviators were doing in their own country was kept very quiet, so that the world,

as a whole, in thinking of aviation and Germany, thought only of the Zeppelins. When the war broke out, it was soon found that the Germans had an immense fleet of aeroplanes manned by expert aviators, and that several types of these machines were much faster than anything the Allies then had. These faster types proved to be modifications of fast French types with better engines.

So far, the war has shown that military opinion prior to the war was right, and that the chief value of aircraft, in their present stage of development, is in reconnaissance and in observation of artillery fire.

Speed is of the greatest importance for three reasons. In the face of a head wind, it is very difficult for a machine to make progress. Should the wind be blowing toward the enemy, and should a machine over the enemy's lines not have sufficient power to overcome it and come back to its own side, it would have to come down in the enemy's lines. This has happened several times during the present war. The greater the height at which the machine flies, the less the observer in it can see of the enemy. If it comes down too close to the ground, it offers a much easier target to the enemy's artillery. The importance of speed, therefore, is evident for the faster it moves, the harder it is to hit; also if a machine cannot outfly the enemy's machines, it cannot escape from them when attacked by several;

neither can it overtake an escaping enemy machine.

The great difficulty in reconnaissance is the height at which the fire of troops and guns compels aviators to keep. Before the war, aviators thought that at a height of three thousand feet they would be reasonably safe from infantry fire. The bringing down of several machines and the many bullet holes made in others by infantry fire have taught them that they must keep up at least six or seven thousand feet. At this height they are not at all safe from the enemy's artillery and must keep moving quickly and constantly to escape being hit. Under very accurate artillery fire, aviators are compelled to go even to greater heights, or to come back more over their own lines, either one of which seriously hinders observation.

Long columns of troops marching along roads, or lines of trenches where the dirt turned up is of a different color from the rest of the landscape, are easily picked out by an observer. Individuals, troops in extended order not moving, guns well dug in or otherwise concealed and not firing — these are very difficult to find. Even a trained officer must have considerable experience before he can become a really good observer.

The concealing of everything, which is the marked characteristic of the modern battlefield, was brought about by a desire to avoid the intense fire of modern artillery, and it has been increased

by the desire to prevent the success of aeroplane reconnaissance. Observers study the landscape carefully so that they learn to recognize any differernce in it from a normal landscape; for instance, four hay stacks more or less in line and near each other immediately excite the suspicion of a trained observer for this is not the way a French farmer piles up his hay. The hay undoubtedly conceals guns covered during the intervals between action. The flashes from guns in action enable observers most quickly to locate an artillery position. Due to the difficulties of observation, a number of aeroplanes, as a rule, are sent out at the same time, each with a different object or set of objects to look for. In this way, much better results are obtained than when each observer tries to find out everything it is desired to know about the enemy.

The height and speed at which aeroplanes must travel when over the enemy's line render it difficult to see anything below. To overcome this, they travel in spirals up and down; this makes them appear like hawks looking for prey.

The long ranges at which modern artillery fires and the efforts made by each side to conceal its batteries so that they may escape the intense fire of enemy artillery, make the efficient observation of fire by ordinary means almost impossible. Therefore observation of fire has become, along with reconnaissance, the chief duty of aviators.

In the performance of this duty, the aviator, as in reconnaissance, has three enemies: bad weather, the enemy's fire, and the enemy's aircraft. He has also another difficulty — to signal to the guns what he has observed, as he cannot come down and go up after each salvo has been fired. Various means are used. One simple method, but one which does not give very accurate results, is the use of smoke bombs. The observer drops various kinds or numbers of smoke bombs to indicate whether the fire is short or over, right or left, or a hit. Sometimes the aeroplane is moved in different directions to indicate the same thing. The most satisfactory method for sending news from the aeroplane to the guns is by wireless, but the reverse does not work well, if for no other reason than that the noise of the machine makes it very difficult to receive a message.

Aeroplanes flying well up in the air with shrapnel bursting all around them are seen almost daily at the battle front and often several times the same day. As the aeroplane's chief value lies in reconnaissance or observation, it is important, if possible, to keep it from performing either of these duties. The field guns, while they seldom bring down any of these craft, manage by their fire to keep them at a considerable height and even at times prevent them from coming over their lines. Most of the anti-aircraft guns designed before the war have

been found not sufficiently powerful, for the reason that when they were designed, it was expected that aeroplanes could keep at lesser heights than they have been able to do. This has resulted in heavier guns being mounted in such a way as to permit them to fire easily up in the air in all directions.

Probably the best means of decisively attacking an aircraft is to concentrate on it a number of similar craft, and thus either destroy it or chase it away.

The fact that aeroplanes can carry so little weight not only prevents their being armed with anything but rifles or very light machine guns, but renders them unable to carry very much ammunition. Their constant movements in so many directions make them very unsatisfactory platforms from which to fire, particularly at such a moving target as is made by another aeroplane.

There have been a few air-duels in which one of the combatants has been brought down, and there have been several instances where a number of aeroplanes have attacked and destroyed another. As a rule, however, after a few preliminary movements, one machine or the other generally decides its opponent to be too strong and makes off; or, an aeroplane seeing it is about to be attacked by several, makes off before the attack can be delivered.

The main weapons of offense used by aeroplanes are steel arrows and bombs. The bombs are of

high-explosives or of an incendiary nature. The arrows are of steel, about as long as an ordinary lead pencil and pointed at one end like a very sharp lead pencil. The greater part of the body is cut away into four flanges, which tend to steady the flight of the arrow through the air. These arrows are put up in a vertical position in large numbers in a wooden box, the bottom of which can be pulled out. When the aviator is ready to drop his arrows, he pulls out the bottom of the box, and the arrows fall in a cloud. They are chiefly for use against troops. There are said to be cases where these arrows pierced men from head to foot.

The explosive bombs are used not only against troops but against trenches, buildings, guns, or material of any kind. The incendiary bombs are used chiefly to set fire to aeroplane hangars, factories, etc., the destruction of which is possible by fire. These bombs may be used in the region occupied by the enemy's army, or against places far beyond the greatest range of artillery.

It is very difficult to hit a desired object with a bomb dropped from an aeroplane, as with an aeroplane going from sixty to seventy miles or more an hour, when the bomb first is dropped, it is given a decided impulse in the same direction as that in which the aeroplane is moving. Until the impulse downward given by gravity becomes strong enough entirely to overcome the other, the bomb does not

move straight down; in other words, its path, when first dropped, is a curved one with the curve bulging in the direction in which the aeroplane is moving.

A wounded British aviator, in speaking of the difficulty of dropping bombs on the desired target, expressed it by saying: "Suppose you put a high hat on the sidewalk alongside the Singer Building in New York, and then went to one of the top stories and tried to drop a pea into it, how well do you think you would succeed?"

The bomb carried by ordinary aeroplanes produces no greater effect when it lands, and generally not nearly so great an effect, as that produced by the projectile from an ordinary field gun; in fact, the projectiles from the heavier field guns do much more damage. This is where the Zeppelins have an advantage over aeroplanes — they can carry more and heavier bombs.

The dropping of bursting projectiles on the heads of troops is nothing new, because the projectiles fired from howitzers and mortars apparently come straight down from overhead. Therefore, when it comes to troops within range of the artillery, the artillery can produce a much greater effect, due to its accuracy of fire, the larger projectiles which it can use, and to the much greater number which it can fire. Also, aircraft can be seen, and the troops know that unless they are directly underneath, they are not in any danger; while artillery can drop its

bombs anywhere, and once within range, troops realize they are in danger of being hit at any moment.

In its present stage of development, the offensive value of aeroplanes used against troops is almost a negligible quantity. In their ability to carry a certain amount of destruction to the enemy's people and material out of the zone of the armies lies the chief offensive value of the aircraft. Even here the effect is chiefly moral, in that no one can feel entirely safe as to his person or as to his property, whereas formerly, once clear of the zone of the armies, there was no need to worry, either as to the safety of the one or of the other.

The material damage done by aircraft bombs is not great. During the raid made by the *tauben* on Paris, in the earlier part of the war, there was but little material destruction, because the results of explosion of bombs were extremely local in their character, the pieces flying only very short distances, and because most bombs aimed at important points, like railway stations and supply depôts, generally missed them.

In the recent Zeppelin raid over Paris, evidently much heavier bombs were used than those dropped from the *tauben*. The holes made by these bombs were as much as fifteen to eighteen feet across and ten feet deep. One of these fell exactly in the center of the roof of a two-story masonry house,

carrying with it a large piece of the roof, a large section of the second story, and a similar piece of the first story, down into the cellar. In spite of the fact that it practically ruined the entire center of the house, which was not a large one, there was no great destruction for any distance in lateral directions.

Another bomb came through the glass roof of a factory, smashing most of the glass. It made a hole in the cement floor about twelve feet across and nine feet deep. Here, too, the destruction was extremely local in character, machinery and manufactured products thirty to forty feet or more distant from the center of explosion escaping any damage.

Such fires as were started by the incendiary bombs, likewise dropped by the Zeppelins, were not at all fierce in nature, and were put out almost immediately, before any great damage could be done. Although the Zeppelin raid was more or less of a surprise, and although the Zeppelin flew over and dropped bombs on the manufacturing districts of Paris, from a military point of view the damage done was of little consequence, as many of the bombs missed the objects aimed at, and such hits as were made, while causing great damage at the center of impact, had little or no effect a short distance away from it.

When the war broke out, it was believed that the

casualties among aviators would be very high. It is said that the French government expected and prepared for a casualty list of one hundred per cent of the original aviators. But up to the present it has been quite small compared with the casualties suffered by a great many regiments. In spite of this, however, the strain on aviators is much greater than that on the average officer and soldier.

Formerly generals could sit on their horses on a hill and see practically all of their own army and all of the enemy's army, while watching what was taking place. As the range and power of weapons increased, armies had to spread over more country and to conceal themselves more or less to avoid losses. The armies also greatly increased in size, so that the generals not only were unable to tell what the enemy was doing, but had much greater difficulty in keeping track of their own forces; in other words, as time passed armies became more and more blind. By diverting cavalry from its proper rôle as a fighting force and changing it into a body of patrols and scouts, an effort was made to clear up the darkness concerning the enemy. At best, this use of the cavalry was unsatisfactory.

With the appearance of the aircraft, armies once more are able to see. Generals once more are being put in a position where they can keep in close touch with their own forces, as well as find out something of what their enemy is doing.

In former days artillery officers were able to see their target, the enemy, but a short distance in front of them, and consequently could tell what effect their fire was having. As the increased efficiency of modern firearms compelled fighting at greater and greater ranges and more and more concealment on the part of the troops engaged, the artillery, through the difficulty of observing the effect of their fire became, like generals, more and more blind. The aeroplane, with its ability to tell the artillery officers how well they are shooting, tends to restore to these officers the control they had when they fired with their batteries at infantry only six or seven hundred yards away.

In the present stage of their development, reconnaissance and the reporting of the effect of artillery fire are undoubtedly the chief functions of aircraft.

CHAPTER XXXIII

RECONNAISSANCE AND ESPIONAGE IN THE PRESENT WAR

April, 1915.

CORRECT information as to the military preparations of a country which may be a future enemy is of great value in peace time. The importance of exact knowledge of an enemy, his troops and their movements in war time cannot be exaggerated. With the exception of Japan, undoubtedly, no modern nation goes to such pains and expense, both in peace and in war time to gain this information as does Germany. As the war continues, the Allies are coming more and more to understand the extent to which Germany made preparations in peace time, so that her generals might receive information of value during war.

Information may be gained either by soldiers or officers working in their own uniform, or by soldiers or civilians working in civilian clothes or in some uniform of the enemy.

From the beginning, German soldiers and officers in uniform have displayed great daring in obtaining information. Every army is preceded by scouts and patrols. The German scouts and patrols have not hesitated to push boldly long distances ahead of and to the flanks of their army. Quite a number of the prisoners captured after the battle of the

Marne consisted of patrols which had reached the rear of the Allies' lines and continued to push forward, not aware of the German retreat, or perhaps aware of it, but cut off and unable to get back. From time to time, these men were found hidden in forests, or were driven by hunger to come out of their hiding places and surrender. As the Germans retreated, they deliberately left behind soldiers and officers who hid in deserted farm houses and other places until the Allied troops had passed beyond them, so that they might be in rear of the Allies' line.

Since the two armies have settled down in their two long lines of trenches facing each other, there is another way by which Germans in uniform get behind the lines of the Allies. The Germans have made many attacks on the Allies' trenches. In a number of instances, the head of the attack succeeds in breaking all the way through the line. The line then being closed up, these men find themselves in rear of it and unable to get back. As these attacks are generally at night, it is easy for men cut off in this manner to take advantage of the darkness to hide in a deserted farm house or one of the many hay stacks scattered all over the battlefield. While some surrender or are captured, apparently there are always a number who choose to hide. During the day-time they remain hidden, but at night, they come out and shoot up small

parties of troops or convoys of supplies. Their chances of doing this are excellent for several reasons. In the first place, a modern battlefield, being several miles from front to rear, furnishes in its many deserted buildings and its terrain ample opportunity for concealment. When fighting is going on, the fire frequently comes from a number of directions, so that suspicion is not necessarily excited by its coming from what appears to be one of the flanks. The intense fire of modern arms has compelled practically all supply, troop, and individual movements to take place at night. In some places these German snipers behind the line have done so much damage that not only have sentries had to be posted in most of the ditches and near most of the deserted houses, but also regular expeditions have had to be organized to hunt them down.

As long as men remain in their uniform, it is comparatively easy, once they have been seen, to catch or kill them. When a soldier or officer changes his uniform for that of his enemy, he does considerably more damage before he can be caught, if caught at all.

There have been a number of incidents where Germans, dressed either in French or British uniform, have driven around in rear of the lines in a motor-car. In one case, several officers from British headquarters went out at night in one of

the motor-cars belonging to that headquarters. They have not been seen since, although the car was reported that night and the next day in a number of different places, just in rear of the lines. As the occupants were in French uniforms, and did not answer the physical description of the British officers who started out with the car, undoubtedly the original occupants were disposed of by Germans dressed in French uniforms who then proceeded to use the car.

There was a British evacuation hospital at B —— which, of course, was just off the edge of the battle-field, and where, during the fighting, hundreds of wounded from a considerable part of the line were received each day. One day, in October, a man wearing the uniform of a sergeant of the royal army medical corps reported to the hospital. He said he belonged to a certain field ambulance but had become separated from it, and was reporting to the hospital for duty. He spoke English perfectly, his uniform was correct, and there was nothing in any way suspicious about him or his arrival, as in heavy fighting men frequently become separated from their units and in such cases should report to the nearest similar unit. But his eagerness to question all wounded and his fluent German, when he spoke to German wounded prisoners, excited suspicion. Investigation showed that he did not belong to the R. A. M. C. nor to the British

army at all. As a result of a court-martial, he was shot as a spy.

Often spies or enemy sympathizers operating in rear of the lines cut the telephone and telegraph wires leading from different headquarters to the trenches and from artillery observing officers to the batteries.

A British infantry officer said that never yet had the Germans made a night attack on the trenches where he was stationed, that a house or hay stack, or something else inflammable, just in rear of the trenches did not blaze up. In this way they were always silhouetted against the light from the flames, enabling the Germans to see them easily, but they could not readily see the Germans in the dark.

The men of a British battery caught a woman signalling with a lamp from a hole in the roof of a house. They were led to this discovery by the fact that although their battery had just changed to a new position, the German fire followed it, and was almost immediately effective in that it killed several men.

The men and officers of another battery noticed an old woman with a dog, who very often passed near the battery. One day, one of the officers became suspicious and followed her a distance. He saw her, when safely behind a hedge where she was out of sight of the battery, release the dog from

its leash. The dog immediately ran as fast as it could straight for the German lines.

Several infantry soldiers going along a road on the battlefield wanted some water. They called to what was apparently an old woman on crutches. As she paid no attention, they started towards her. She immediately dropped her crutches, gathered up her skirts, displaying a pair of very strong masculine legs, and made off as fast as she could for a neighboring wood.

That the German information system works well has been shown again and again by the way in which German batteries promptly find with their fire the Allied batteries which have changed position during the night.

The town of L——, which is within artillery range of the Germans, was visited one day by an army corps commander and some of his staff, who entered the town in such a manner that they could not possibly have been seen by the Germans from their lines. Within ten minutes of their arrival, and during a period of twenty minutes, the Germans dropped forty shells into the town, showing that somehow they had been notified of the arrival of important officers.

There can be no doubt that during the recent air raid on Paris that the Zeppelins were signalled to by people in Paris. A number already have been arrested for this offense.

The hardest to deal with are the civilian spies. Some are Germans who have lived for so many years in the community that they have been accepted as part of it. Some of these people have remained and, of course, aid the Germans in every way they can. Those who returned at the outbreak of the war were mobilized and put in regiments going to the districts in France in which they have lived. In this way the German troops not only are sure of having guides who know the district in which they are operating and everything connected with it, but of having friends in that district when they arrive there.

The most dangerous of all are the traitors, unfortunately found in every country, who for money are willing to betray their own country. There have been enough of these in the different districts to aid the Germans materially.

Another means which has been used since the beginning of the war is to place spies, either of German origin, or Belgian or French traitors, among the refugeés who come into the lines from Belgium or from the invaded French provinces. Large numbers of these people arrive, and they generally come at the critical periods when all the civil and military authorities are most busily engaged. There is, therefore, no possible way in which a careful examination can be made of each individual. For this reason, the army promptly moves the refugeés off

the battlefield, and the gendarmerie round them up in the nearest towns and see that they move on to districts way in the rear of where the fighting is going on. Only the regular inhabitants are allowed to live in each commune. Thus even though there may be spies among the refugeés, the damage which they can do is materially decreased.

One very important reason for sending refugeés entirely out of the theatre of operations is that back of the armies, the engineer troops are constantly engaged in building new lines of trenches in all favorable positions. It being impossible to spare troops from the line to build these trenches, civilians have to be employed. If refugeés could settle down in these districts, it would be very easy for spies to work on such trenches and know their exact position and strength, in the same way that Japanese disguised as Chinamen worked on all the Russian trenches in Manchuria and the Liao-Tung Peninsula.

In all towns and villages in the districts occupied by the British, notices are posted saying that no one except those in uniform will be allowed to use a bicycle or an automobile; that no one will be permitted to leave the town by any method whatsoever between 6 p.m. and 6 a.m., and that no one will be permitted to leave his house after 6 o'clock at night; that access to the British lines is forbidden, except when the person concerned has a pass signed

by competent British officers. No passes are given to people to go to towns on or near the lines, unless the mayor of that town certifies that he knows the applicant, and there is a special reason why such a pass should be given.

All military automobiles are registered and have military numbers painted on their hoods. Even with this number and although the occupants are all in uniform, it is impossible to enter or leave any town without a pass. At all entrances and exits to all towns in France, sentinels are stationed who allow no one by without a pass. If the pass is not in order, or if there is no pass, they do not turn the individual back but arrest him, and he is immediately investigated.

Before a railway ticket can be bought, a pass must be obtained from the police-head of the district in which the individual concerned resides. On the completion of a railway journey, no one can leave the depôt until he had shown his pass. These passes state exactly from where to where, by what route, and when, the individual is permitted to go.

Every individual in France must have on his person at all times papers absolutely identifying him. Foreigners must have not only a passport but a *permis de séjour* on which is their photograph with an official stamp affixed. This *permis de séjour* is a permission to reside in the district in which the foreigner happens to be living.

On the roads between towns at different places, generally railroad crossings, are posted sentries who insist on travelers showing a proper pass. In addition, the gendarmerie frequently patrols the roads and demands passes and papers from everyone they meet. In this way, the authorities have almost complete control over all individuals in France. In spite of this, however, and the severe punishment meted out for obtaining information for the enemy's use, considerable espionage still goes on.

An enemy soldier or officer caught in the uniform of his own army getting information within the lines is a scout, and according to the laws of war cannot be executed but must be treated as a prisoner of war. A soldier or officer caught in civilian clothes or in a uniform other than that of his own country is a spy, and after trial can be executed as such. In Europe, such spies are generally shot; in the United States, they are hanged.

A civilian who, either as a civilian or disguised as a soldier acting clandestinely or under false pretenses, obtains or endeavors to obtain information for the purpose of communicating it to the enemy is a spy who after trial and conviction should be shot or hanged.

To be a war traitor or to commit war treason is as serious as being a spy. In some countries, such as Great Britain where the laws are not sufficiently severe in dealing with spies, the death

penalty is obtained by convicting the individuals guilty of espionage on the charge of war treason. Ordinarily, war treason is committed when a civilian inhabitant of a country occupied by an enemy army gives military information to, or in any other way aids, his own army against that enemy. Persons convicted of this offense are called war traitors, and are sentenced to death. This is the law of every country, including the United States.

CHAPTER XXXIV

FORTRESSES IN MODERN WAR

September, 1915.

PRIOR to the war, the general public had great faith in forts and fortresses, probably largely due to their outward and visible signs of strength. For a long time, many military authorities have been questioning the value, not so much of field fortifications but of large fortified positions prepared before the war. They have been particularly dubious of fortresses which could be surrounded; the shutting up and surrender of Bazaine's army in the fortress of Metz at the time of the Franco-Prussian War contributed much to this doubt.

On the whole, however, military opinion has inclined to the belief that the fault is not with the principle of having strong points from which an army can operate or upon which it can fall back, but that the methods of making these points strong have not kept pace with the methods of attacking them.

The rapid capture by the Germans of the Belgian fortresses has influenced public opinion to the belief that the day of the fortress has passed. As in most questions concerned with the war, the exact data on hand is entirely too limited for any definite conclusion to be arrived at as yet.

Standing apparently in direct opposition to the quick capitulation of the Belgian fortresses, is the fact that the French fortified line along their eastern frontier thus far has not been penetrated by the Germans where they have come in contact with it. This may be due to the strength of the fortifications, or, as is more probable, to the fact that they are protected by well-defended fieldworks erected between them and the enemy. Then, too, up to the present time they have not been seriously attacked. Should heavy attacks be made upon them, their fall or successful resistance will have much to do with the future of permanent fortifications.

The Austrian fortress of Przemysl resisted for some months before yielding, but when attacked by the Germans and Austro-Hungarians was recaptured after a few days' fighting. The quick recapture probably was effected because most of the permanent defenses had been partially, or wholly, destroyed by the Austro-Hungarians before their surrender to the Russians.

The fortresses of Ivangorod and Brest Litovsk, the two southernmost of the four principal fortresses in Poland, fell comparatively easy. Ivangorod, the first taken, is a fortress pure and simple, being built at the junction of the Wieprz River with the Vistula, which made it an important strategic point aside from the fact that it is also a railway

H. J. R.

ON THE PARAPET OF FORT KOBILYANI IN FRONT OF BREST LITOVSK

Showing shell holes in the foreground and demolished ditch defenses beyond

H. J. R.

ONE OF THE IVANGOROD FORTS DEMOLISHED BY THE RUSSIANS BEFORE THEIR RETREAT

junction. It is a typical fortress on a large scale of the period of the past twenty years of the nineteenth century. In the center is a large citadel built of brick, surrounded by an outer parapet of earth with concrete magazines and emplacements for the guns. Outside of this is a ditch with *ditch defenses*, which are galleries for riflemen and machine guns, placed in a ditch in such a position as to fire down it, thus making it impossible for an attacker by getting into the ditch to be safe from the fire from the fort, as he otherwise would be.

Around the citadel, at a distance of from four to five kilometers, depending upon the topographical features, was a ring of six forts — four west of the Vistula and two east of it. Between the two eastern forts and the citadel were two more forts, making eight in all.

Apparently the experience of the Russians in the war had been such as to make them mistrust this type of fortification, for they took practically all of the artillery out of these forts and used it in the defense of a position on the hills roughly parallel to the eastern bank of the Vistula. This position was far enough from the Ivangorod forts to necessitate its capture even before the heaviest German and Austro-Hungarian guns could reach them; it was similar to that which an army takes up in the field and strengthens by building infantry trenches and artillery gun-pits.

The Twelfth Austro-Hungarian Corps came up and prepared to attack Ivangorod. While these preparations were under way, three German divisions succeeded in crossing the Vistula, and, in spite of Russian attacks, penetrated beyond the railway running from Warsaw to Ivangorod. At the same time, the army of the Archduke Joseph Ferdinand, with that of von Mackensen on its right, was approaching from the south, but west of the Vistula. Therefore, unless the Russians could stop the Germans on the north and the Austro-Hungarians and Germans on the south, it was only a question of time until Ivangorod would be surrounded. By the time the Twelfth Corps had come in touch with the Archduke on the other side of the Vistula, they were ready for their assault on the position in front of Ivangorod. After an artillery preparation of two hours with seventy guns of various calibers, the Austro-Hungarian infantry made the assault at 9 a.m. on August 1. Twelve battalions (12,000 men) made the attack, and by night they had captured the whole of the position, 2,500 prisoners, twenty-one heavy guns, eight field guns, and fifteen machine guns. Their own losses were only forty dead and 200 wounded. This capture meant that the Austro-Hungarian guns could be placed where they would hammer the forts. However, the Russians shortly after evacuated Ivangorod, blowing up the forts and the

main defenses of the citadel and setting the citadel itself on fire. It is not known whether this evacuation was due to a lack of faith in the resisting powers of the fortress or a feeling that the morale of the troops was such that if shut up in Ivangorod they would surrender without offering proper resistance, as was the case at Novo Georgievsk later on.

Brest Litovsk was constructed on a plan similar to Ivangorod, but on a larger scale, and having in addition to the west an advanced line of batteries and permanent infantry redoubts built practically according to the latest ideas prevalent before this war.

The Austro-Hungarians, coming from the west, made preparations to attack its outer line. German troops to their north crossed the Bug and threatened the communications to the east. After three days' preparation, the Austro-Hungarians subjected the outer line to a short artillery bombardment and assaulted with a division. The result was the same as at Ivangorod: they captured the position with slight loss. Incidentally, the heaviest gun used in the artillery preparation was a ten centimeter, the heavier ones being still on the road.

On losing this position, the Russians retired to the inner line. One day's fighting, not heavy at that, ousted them from here. They then blew up the forts, evacuated the fortress, and mostly escaped to the southeast, as the Germans were closing in

from the north. The same doubt exists as to their reasons for this evacuation as in the case of Ivangorod.

With so many factors entering into the case of each fortress and the difficulty of giving each factor its proper weight, it is impossible to come to definite conclusions at present. Nevertheless, one fact does stand out clearly: probably the most important factor of all is the morale of the troops defending a fortress. The best and most modern fortress, with every machine man can invent, will very soon fall, unless it is garrisoned by well-trained, well-led, determined soldiers. The man is always superior to the machine in the end.

CONCLUSION

CHAPTER XXXV

LESSONS AMERICA SHOULD LEARN FROM THE GREAT WAR

DURING the several months that the author has been home, his work for preparedness has brought him in contact with thousands of his fellow countrymen and countrywomen. He has been particularly impressed with the fact that American people, in general, have no conception of what war really is. In discussions of the present war and of preparedness, the idea continuously crops up that because we do not think a thing is right it cannot happen.

The American people apparently do not realize that the fact that nations cannot agree as to what constitutes the right or wrong of a question is what causes war, and that once war comes, pure force settles the matter; in other words, it seems almost impossible to make us see that we might be fully convinced that all the right in the world was on our side and all the wrong on the other and yet be forced to yield to the other side because of its superior physical force.

In many quarters there is a tendency to avoid disagreeable facts which tend to upset preconceived notions or prejudices and to become angry with those who enunciate these facts, in much the same

manner as some people avoid all mention of death and dislike anyone who brings up the subject. If truth is to be avoided because disagreeable, then reason is surrendering to fear. No race which regulates its activities through fear ever has survived competition with one governing itself by reason and thereby overcoming fear.

Even those of us who hope for adequate preparation for national defense too often do not understand what a nation in arms really implies; what invasion really means; and what battle really is.

The best way to understand the meaning of a nation in arms, as it is understood by the European nations engaged in this war, with the single exception of Great Britain, is for every man, from eighteen to forty-eight inclusive, not physically incapacitated, to imagine himself at some one of our army posts undergoing vigorous recruit training nine or ten hours a day; or in a line of trench stretching from Albany, New York, to Richmond, Virginia; or in a bed in some one of the many hospitals in the United States recovering from a wound or wounds; or guarding one of our many bridges or railways. Let every woman think of what it would mean to have every one of her male relatives or friends between these ages in one of these positions, exposed to sudden death or undergoing suffering. That is what a nation in arms means.

But, say a great many, "We don't want that!"

Perfectly true, we do not want it; but until we can find some way of settling the affairs of this world without fighting, we will have to face it.

We will have to face such a condition simply for the reason that any real foe who attacks us will put the whole of his manhood in the field, and the only way we can get sufficient numbers to resist, is to do the same with ours. Modern war demands this.

Universal military service cannot be escaped, if a country wishes to be prepared to meet its rivals on equal terms. From the beginning of this war every force Great Britain has put in the field has suffered from the lack of sufficient troops. After more than a year and a half of war, this is still true. Her experience proves what the history of other nations taught them many years ago, and what our history should have taught us long since — that numbers can be obtained only by enforcing universal military service.

When armed troops of one nation enter by force the territory of another, they are not going to permit their movements nor the enforcement of their will to be in any way interfered with by the inhabitants. They have entered for the purpose of destroying the armed forces of that country and by this means to make it yield to the will of their own people. Nothing will stop them from carrying out this mission other than defeat at the hands of the army of the invaded country.

There are but two honorable alternatives open to a man in time of war. One is to enter the army of his country and fight openly in its uniform. This gives him the right to kill and wound the enemy and otherwise hinder his advance, and to defeat him; and with these rights comes the risk that the enemy will do the same to him, because his uniform marks him plainly as being an opponent. However, the uniform also marks him as having the rights of a belligerent, so that when wounded or captured he is entitled to live and to reasonably good treatment. The second course open to a man is to remain a civilian and, by carefully abstaining from all hostile acts, gain that immunity from harm which is accorded civilians who are obviously non-combatant.

No army will tolerate civilians to cut its telegraph or telephone wires, to tamper with its railway or wagon transportation, or to shoot at or otherwise kill or wound its men. When these things occur the civilian responsible, if caught, almost invariably is executed at once without trial. Where the individual or individuals responsible cannot be captured immediately, the community is punished. The punishment is kept up as long as the hostile acts continue, and, in most cases, increased in severity until they cease.

If civilians wish so far as possible to avoid any conflict with the invader, they must keep

their hands off firearms, wire-cutters, and explosives. Wherever fighting takes place between two bodies of troops, it is inevitable that most of the houses on the battlefield will be destroyed. To be safe, the people who live in these houses must abandon them and go far enough to the rear to be out of range. If they remain on the battlefield, some will be killed and wounded.

Many of us say: "This is horrible! It is not right." The fact remains, however, that the only way to avoid it is to be strong enough to prevent any power from invading our country.

Once an invasion takes place, this is going to happen. Protesting in writing, or in speech, will not stop it; the only thing that will stop it is sufficient armed force to destroy the invader or drive him back where he came from.

Many seem to imagine that a battle is a kind of a game, with governing rules, umpires and referees to apply them and the police within reach to stop the play, if it become too rough. They do not seem to grasp the basic fact that a battlefield is a place where two bodies of men meet, each determined to die rather than to yield to the other. Both cannot succeed; one must yield. This means that the battlefield must be made such a place of terror that finally the instinct of self-preservation will overcome the determination of one side or the

other to die rather than yield, and they run away or surrender in the hope they may not die. While the killing or wounding which takes place in battle is done with the purpose of reducing the number of opponents operating weapons of some kind, probably the most important result accomplished by it is the way in which it weakens the determination of the men left alive and uninjured. The man who gets the top of his head shot off in battle is not worried about it because he is dead. His neighbors who see it done and are spattered with his blood and brains, however, are worried about it and do not soon forget it.

Nothing can save troops in battle other than their own skill and determination. Lacking these qualities, the men are lost, as, unlike a street fight or a riot, there is no police force at hand to stop the successful opponent from enforcing his will to the limit.

Untrained or partially-trained troops cannot succeed against well-trained ones; not only because the latter can handle their weapons more efficaciously but, primarily, because the latter through discipline have reached the point where the instinct of self-preservation is so well submerged in a sense of duty that the terrors of the battlefield cannot bring it to the surface, while with the untrained, it is on top to start with.

It is easy to arouse the average American to an

interest in the mechanical part of war. He always wants to know the caliber of guns, their range, the number of shots they can fire a minute, what the ammunition weighs, how many each army has, and so on; the newer and more powerful the weapon, the greater his interest. This however seems to be about as far as he is willing to go. He seems to think that the mere possession of these weapons settles the entire question of war. He may admit that training is essential before a soldier can use these weapons properly, but always greatly underestimates the time necessary, probably because he is given to confusing merely understanding how a weapon works with being so accustomed to its proper use as to handle it almost automatically in time of such great stress as is common in battle.

While the average American is interested in weapons and will admit the necessity for training in their use, he practically never considers discipline, or does so only to despise it. Yet the one thing, above everything else, on which all European officers to whom the author talked agreed was the absolute necessity of discipline—Belgian, British, French, German, and Austro-Hungarian all insisted that for battle troops could not have too much of it.

By discipline is not meant subserviency, which apparently to the American mind is synonymous with discipline, but that subordination of the selfish

instincts of the individual which makes him work with all his will for the accomplishment of an end in order to benefit the whole of which he is merely a part; in other words, a mental condition which makes the soldier and officer think not of their personal danger but solely of the successful accomplishment of the duty which has been assigned to the military unit to which they belong. The possession of this discipline is what enables well-trained troops successfully and easily to withstand conditions which scatter the untrained to the winds. Furthermore, it cannot be acquired in a few weeks or a few months.

Above all, success in war demands a united people who firmly believe in a cause and are determined to have it triumph no matter what sectional, political, class, or personal, interest may suffer.

Have we such a people? If not, are we working toward that end or in the contrary direction? The discussion of this question is beyond the scope of the present volume. Present-day indications are, however, that the time has come when most serious consideration should be given this most important question.

Most of the food needed for an army can be bought at any time, provided the money necessary is at hand and the markets of the world are open. Since the beginning of the war, the markets of the world have been open to Great Britain and her

allies, and practically closed to Germany and hers — and this without a decisive sea fight. The reason is simple: in times of peace Great Britain took advantage of her superior resources to build a fleet so much larger than any Germany could afford, that up to the present the supremacy of her fleet has remained practically unchallenged. In other words, where one of the belligerents in times of peace translated superior potential resources into a fighting force, supremacy has been unquestioned since the war began. The vast amount of the many kinds of material needed to equip an army cannot be procured quickly in time of war, unless proper preparations are made in time of peace.

The Entente Allies practically have unlimited financial resources and also have the markets of the world open to them. In spite of this, and in spite of their superior numbers, after more than a year and half of war, Germany is still on the offensive; that is, up to the present her enemies have not been able to take the initiative away from her and put her on the defensive, the first step toward her defeat. This is explained by the fact that although possessing smaller potential resources, Germany carefully made all arrangements in time of peace to translate them immediately into fighting armies with everything necessary to sustain them in time of war. The obvious lesson is that only where superior potential resources are translated

into a fighting force prior to war are they of immediate value when war comes, if of value at all.

The present war shows, as has every other, that proper preparation in time of peace insures the ability to strike at once and with the full force of the nation from the very beginning, with the result that the greatest effect is obtained with the least cost.

Failure to prepare means resting on the defensive from the beginning, with strong possibilities of being defeated before the resources of the nation can be put into such shape as to enable the offensive to be taken. Successfully taking the offensive is the first step in the defeat of an enemy. Until that step can be taken, the enemy has the advantage. Prussia learned her lesson at Jena and Auerstädt in 1806; Austria learned hers at Königgrätz in 1866; France, at Sedan and Metz in 1870–71; Russia, at Liao-Yang and Mukden in 1904–05; Great Britain is learning her lesson to-day; while Italy, Japan, Argentine, Chile, and all the other nations of importance have profited by these lessons and have adopted this principle: "In time of peace prepare for war."

The United States alone refuses to profit. Are we going to remain so blind, so obstinate in our stupidity, pride, and prejudice that nothing but disastrous and humiliating defeat on our Atlantic or Pacific seaboard, or on both, will convince us?

INDEX

Aeroplane in war, 227, 357–369
—observation of artillery fire, 331, 361, 362
—bombs, 281, 366
—reconnaissance, 361, 369
Allowance to dependents in France, 59
Aisne, battle of the, 133
Ambulance, field, 294
American Ambulance Corps in France, 216, 217
Ammunition trains, 228, 328
Armies, strength of the opposed, —France, 24, 55; Great Britain, 88, 93; Germany, 158
Armies, comparative strength of, 122
Arras in war time, 31–40
—ruins of Town Hall of, 38
Artillery, 326–344
—Austrian, 305-mm. gun, 343
—bombardments, 254, 255
—concealment of, 39, 328
—curtain of fire, 339
—effective fire of, 319
—effect on green troops of, 280
—French, 32
—French 75-mm., 313–325
—gun-pits for, 329
—gun-pits for anti-aircraft guns, 330
—indirect fire of, 320
—observation points, 69, 233, 330
—zone, 229
Austro-Hungarian army, 177, 178
Austria-Hungary threatened, 176

Barbed wire entanglements, 233, 244, 265
Battlefield, approach to modern, 223–236
Bayonet fighting, 255
—in trench warfare, 256, 264, 283, 311
Belgium, invasion of, part of German strategy, 126
Bomb-proof chambers, 245
Brest Litovsk, 385
—fall of, 190, 210
Breastworks, 248
British armed strength, 88–89
—army, equipment of, 104–111
—at the battle of Marne, 90
—attitude, 7, 10
—campaign in France and Belgium, 88–94
—casualties, 93, 113, 138
—Indian troops, 12, 100, 284, 285
—infantry, 108
—losses, 93
—military system, 88, 95–103, 115
—troops, morale of, 283, 284, 286
—wounded, 215–221
—volunteer system, 98, 99, 115–121
—recruiting methods, 115

Campaign, summary of, in western theatre, 122; in eastern theatre, 204
Casualties, average British, per day, 113, 138
—French, 93
—French at battle of Marne, 42
Cavalry, 345–351
—Austro-Hungarian, 177
Charleroi, 89, 128
Civil government of occupied territory, 199.
Civilian population, dangers to, 39, 64–87; Poland, 193, 199, 201
Communications, Austro-Hungarian-German, in Poland, 182–186

Compulsory military service, French, 22–24, 43, 49; needed in Britain, 94, 105, 112–121
Confidence, necessity of, in officers, 48, 149
Conscript soldiers, spirit of, 44, 54
Conscription in Europe, 45
—advantages of, 111
Cossacks, 195
Curtain of fire, artillery, 339
Czechs, attempted surrender of, to Russians, 179

Depôts, regimental, 55
Discipline, 48, 49, 150
—habit of, 280
—importance of, 46
—in Prussian Army, 155
—purpose of, 47
Dressing stations, 290
Dunajec River, Russian defeat on, 341

Emden, the cruiser, 11
Engineer troops, work of, 66
—mining, 267–275
—work of Germans, 183, 184
Entrenching tools, French, 277
Equipment, German army, 162
Espionage, 370–380

Field ambulances, 293, 294
First aid to wounded, 289
Flanking movement, French, 133–135
Fortresses, 125, 381–386
French "75", 313–325
—army of 1870, 41, 43
—attitude toward the war, 8, 15, 54, 71
—mobilization, 25–30
—military system, 22–25, 51–57
—postal regulations in war, 59
—strategy, 41
—system for maintaining army in war, 51–57
—wounded, 19

German Army, beginning of, 155; equipment, 162; peace organization, 158
—military system, 157; maintaining army in war, 159–161
—attitude towards war, 162
Gurkhas, fighting spirit of, 12

Hand-grenades, 265, 311
Head-cover in trenches, 246
High-explosive shells, 322, 336
Hong-Kong at the outbreak of war, 1–5
Hospital Corps, 289–306
—evacuation, 297
—base, 304
—trains, 303, 304

Infantry, 307–312
—attacks, 237
—in trenches, 234, 288
—mental strain under artillery fire, 308
—under fire, 229, 339
Italy, entrance in war of, 173
Ivangorod, 382
—fall of, 210, 384

Joffre, General, famous order of, 42, 130.

Kitchener's new army, 98, 104–111

Liège, 127
Listening galleries, 268

Machine guns, 260, 261, 352–356
—in trench warfare, 355
Malingerers, 284
Marne, battle of, 130–132
—British at, 42, 90, 129, 131
Marseilles at the outbreak of the war, 15, 16
Mass formation in attack, 167
Melinite, 270
Mining operations, 267–271
Mons, British at, 88, 89, 128
Morale, effect on, of wounded, 47, 216, 278, 280; artillery, 280; inaction in trenches, 281
—importance of, 215
Mortars, trench, 266, 311
Motor-trucks, 224, 229
Music in British army, 286
—effect of, in the field, 106
—in Hungarian army, 201

Namur, 127
Napoleon on casualties, 168

Neuve Chapelle, British at, 92, 93, 114
Night attacks, 250, 257
Nova Alexandria, burning of, 195
Novo Georgievsk, 208, 210

Object of warfare, 46
Offensive of Allies postponed, 205
—German, attempt to reach Calais, 136, 207; on Dunajec, 207; transferred from west to east, 204
Open extended order of attack, weakness of, 168
Overhead cover, 248

Paris in war times, 19–21
Pioneer battalions, German, 183
Police, battle, 166
Polish brigades in German army, 203
Poland, invasion of, 193–203
Polish quadrilateral of fortresses, 208
Preparedness, British lack of, 89, 94, 100, 171
—pleas for British, 102
Prussian military system under Frederick, 155
Przemysl, siege of, 204
—fall of, 205, 341, 382
Psychology of battle, 278–287

Recruiting, British methods of, 115
Railway battalions of Germans, 183
Reconnaissance, 370
Refugees, French, 60; Polish, 202
Russian prisoners, 187–192

St. Mihiel, German advance at, 137
Sapping operations, 262
Shrapnel, 321
Star shells, 259
Strategy, German, 122, 169, 170, 171,
—fundamental principles of German, 124
—French, 125
—of Allies, 139
Swiss military system, 145, 146; beginning of, 148
—mobilization, 147

Tactics, German, 169
Transport wagons, 185
Trench warfare, 42, 234–277
Trenches, best location for, 243

Uneasiness of troops before battle, 278, 279

Volunteer system, British, 98–101, 115–118
—injustice of, 119
—failure of, 120

Warsaw, fall of, 210
West Point, 150
Wounded, 228, 293–306
—care of the, 288–306
—dressing stations for, 234
—experiences of, 218

Ypres, Germans at, 137

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